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# Electrical Merchandising

Vol. XXI, No. 4

McGraw-Hill Co., Inc., New York

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AMERICANS  
NEVER YET  
STARTED  
ANYTHING  
THEY COULD  
NOT FINISH



B U Y  
VICTORY  
BONDS  
AND FINISH  
THE JOB

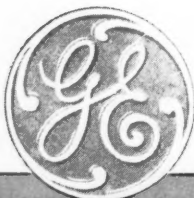


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INCORPORATED

the Time!  
April 19  
the Place!  
Your Window  
and the Girl!



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**EDISON LAMP WORKS OF GENERAL ELECTRIC COMPANY**



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## ON THE WIRE WITH THE EDITORS



### Again—Mr. American Farmer

IN MAY, 1918, ELECTRICAL MERCHANDISING introduced you, Mr. Electrical Man to Mr. American Farmer. You were asked to get acquainted with him, to recognize him as your neighbor, and to do business with him.

During the past year you have in a considerable measure become better acquainted with Mr. Farmer, and you have done a worth-while business with him. All of which is fine and good—but all of which is to be even better.

A year ago we were locked in a life-or-death grapple with Germany and all her hordes of destruction. Today we are victors and almost, let us hope, ready to conclude formal peace. Hence, today even more than last May is your day of opportunity to do an excellent business with Mr. Farmer. To emphasize this opportunity, to give you working information about the farm market, to interpret the market and the farmer, and to inspire you to make the most of your opportunity, the editors present you, Mr. Electrical Man, with this issue on electrical farm-lighting and power.

### Central Stations—May

FULL speed ahead, now that the war is over. Briefly, that slogan expresses the spirit of the electrical men who are now busily planning the annual convention of the National Electric Light Association, which is to be held at Atlantic City, May 19-22. This spirit the editors of ELECTRICAL MERCHANDISING will endeavor to reflect and reinforce in the May issue, will be a special central station number, concerned largely with what the convention means to all within the electrical industry who are engaged in the retail merchandising of electrical service, supplies and appliances.

McGraw-Hill Company, Inc.  
Tenth Ave. at 36th St.  
NEW YORK

TO EVERY EMPLOYER AND  
EVERY EMPLOYEE EVERYWHERE:

LIBERTY has a message for all of us when she tells us that we must keep faith with those who sleep in Flanders' Fields.

#### HOW CAN WE KEEP THE FAITH?

*By over-subscribing the Victory Loan.*

*By doing justice to every worker and by meeting with patience and in a spirit of compromise the troublesome industrial problems ahead.*

*By rendering a fair day's work for a fair day's pay.*

*By insisting that the way of sound progress is by evolution, not revolution.*

*By making, each in his particular job, whatever sacrifices are necessary to bring about that reign of justice for which our sons and brothers suffered and laid down their lives.*

THEY DIED that we might live in peace and happiness; shall we cast away their blood and scoff their death by strife and disorder and injustice?

Sincerely yours

ELECTRICAL MERCHANDISING  
ENGINEERING NEWS-RECORD  
POWER  
AMERICAN MACHINIST  
ELECTRICAL WORLD  
COAL AGE  
ENGINEERING & MINING JOURNAL  
ELECTRIC RAILWAY JOURNAL  
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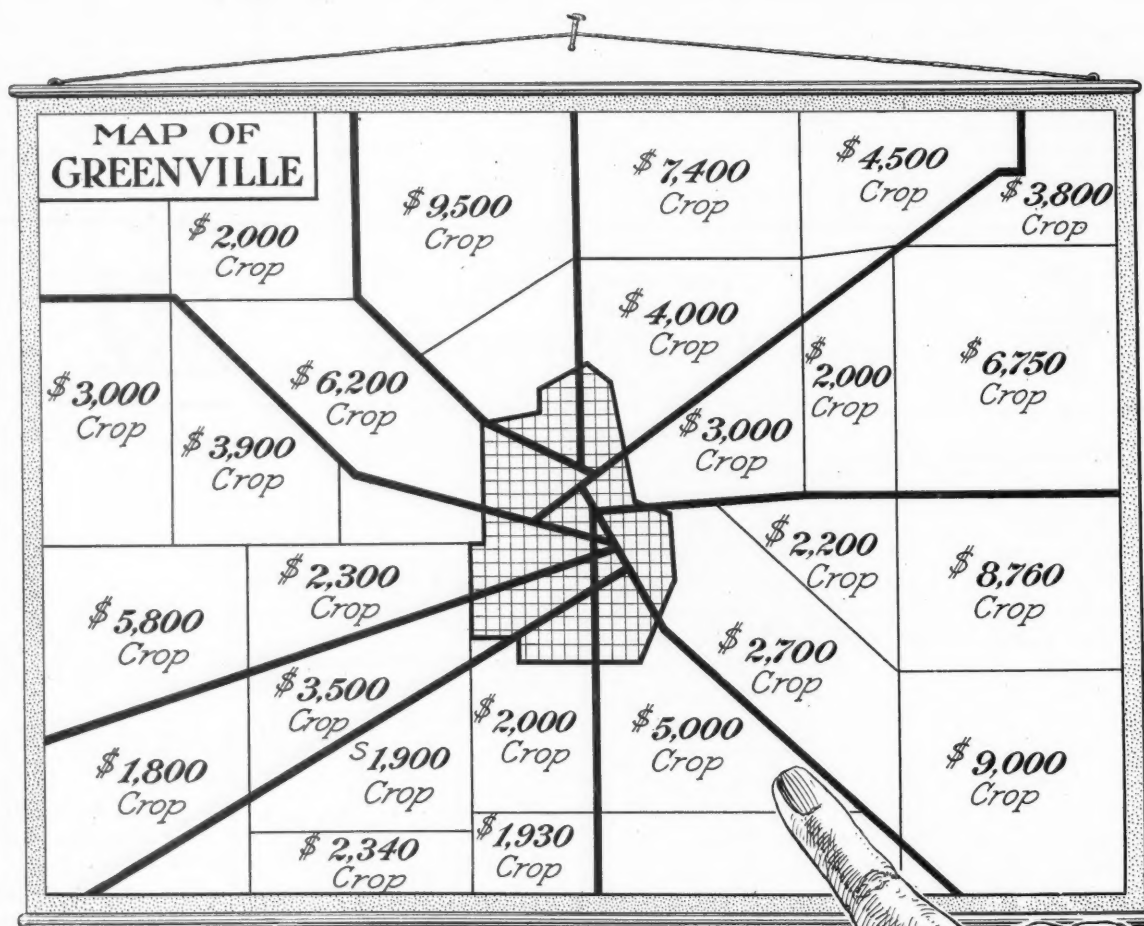
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ELECTRICAL MERCHANDISING

"DO IT ELECTRICALLY"



## Your Banker Plans His Business on This Buying Power—Do You?

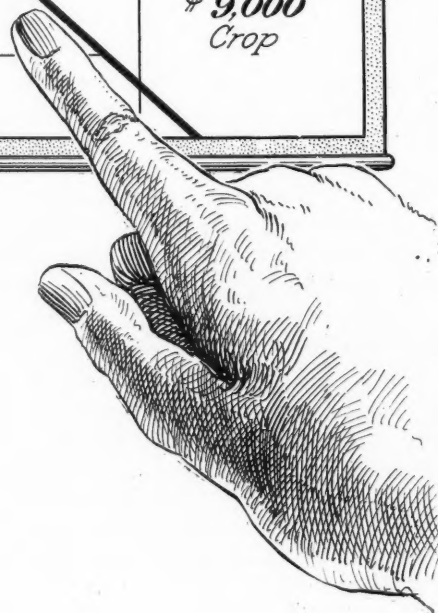


### Sixteen Billion Dollars

**A**LMOST six and a half million American farms! Does your mind grasp the possibilities of that market? Millions of farm houses, barns, stables, corn-cribs, dairy houses, cattle sheds, chicken houses, hog houses, garages, and other buildings all dingy with kerosene lamps and lanterns—waiting for electric light! Millions of farm machines and devices operated by tired human muscles—waiting for electric power! Do you see your share of that market?

Sixteen billion dollars worth of farm products in 1917! Does your mind begin to comprehend that buying power? Billions of dollars for all the every-day necessities on the farm. Millions at least for farm machinery!

What will be your share of the expected 50,000 sales of farm-light and power plants during 1919? The prizes are yours, waiting for you—if you will take them.





# Electrical Merchandising

The Monthly Magazine of the Electrical Trade

With which is incorporated ELECTRICAL MERCHANDISE

Volume 21

April, 1919

Number 4

## You Can Not Straddle the Fence

**T**HE small town electrical man can not maintain a neutral attitude toward the farm-lighting plant business. Like the local banker he is a professional man, because in many cases he will be consulted by the farmer before a purchase is made. This means that the farmer will not let the contractor or dealer try to sit on the fence and keep silent.

This business has grown to large proportions, and since in the last analysis a farm-lighting plant is a miniature central station, the electrical contractor who does not sense his responsibilities in reference to the development of this business is not true to his profession.

Here is a business wherein the idea of the use of the plant must first be sold—then the plant is sold—after which comes a wiring and installation job—then follows the sale of the necessary accessories—and finally the plant must be satisfactorily serviced.

From every angle this is a creative business.

The wiring work on 50,000 or more farms in 1919 will go to the electrical contractor if he will study the needs of this field, and if he will meet other forms of competition not on a price but on a service basis. The local contractor who will help the local dealer create farm-plant business need not worry about his share of the profits.

The electrical man who already knows what it means to sell an idea just as he knows what it is to sell a commodity, and who is willing to be taught the details of specialty salesmanship, will find that a farm-lighting plant agency gives a 100 per cent load factor for his talents. There is no other form of specialty salesmanship in the electrical industry that has been developed as has this form.

The established electrical contractor who knows how to capitalize his professional standing in his community can develop a business that will produce profits all the year round.

Get over the fence and cut your melon.



Thirty million Americans live on farms. These people want electric light and power. They have ample money to pay for farm-light and power plants. Somebody is going to sell these plants

to these Americans. If you are the man, you must know the how-when-where-and-why of the selling. If you do, well—the prizes are yours. Are you going to take them?

# How—When—Where—Why of Farm Plant Selling

Finding His Town Too Small to Supply Him with Enough Customers to Keep His Business Going,  
This Electrical Contractor Began to Sell Farm-Light and Power Plants—Now  
He Sometimes Sells Six Plants a Week—Here Are His Methods

**E**IGHTEEN years ago Perry L. Young, now of Greene, N. Y., was bitten by the "electric bug." As thousands of other "kids" have done, he wrote to a mail-order house for an electric bell outfit. And, as he says, he has never been able since to separate himself from the fascination of the electrical game. To him it is a game—a great, absorbing game, which brings out the best in a man.

"How did I come to get into the farm lighting business?" echoed Mr. Young to my question. "Blessed if I know; I suspect I just grew to it. My first work was rural telephone construction, then electric trolley line work. Somehow or other I landed in Greene, N. Y., and hung out my shingle. My earlier experience made me lean toward farm lighting.

"First I tried to confine my efforts to residence and industrial work but the field in my city didn't seem large enough and at the start I found it

## By Perry L. Young

Electrical Contractor, Greene, N. Y.

As told to

**R. B. WOOLLEY**

Of the Society for Electrical Development

very difficult to get customers to allow me to install openings and outlets which I knew they would later wish they had, as soon as they came to know all the possible uses of electricity. I found that most housewiring contracts are let—or lost—because of two things. First, the houseowner is either sold or not sold on the fact that the job will not result in a torn-up house, marred ceilings, walls, floors and furnishings. Or, secondly, he is either sold—or not—on the fact that the resultant bill will not paralyze his pocket-book.

"One day I went out to sell housewiring to a retired farmer living on

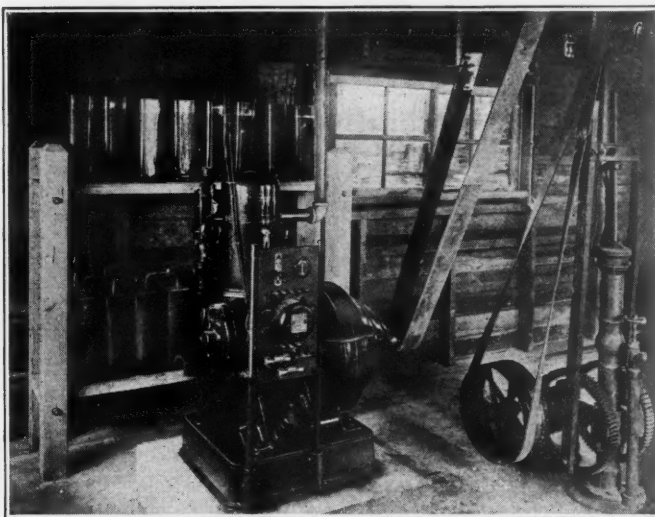
the edge of town; from him I got a line on some farmers who had told him they were interested in having electricity on their premises as they had been reading some advertisements which had really been aimed at the city man. Well, I went to see them, and this was the beginning of my venture as a farm lighting plant dealer.

"There are unlimited prospects for lighting plants in every state, and New York is no exception. The field is large and when it comes to socket devices for farm plants the sky is the limit. Farmers out my way are crazy about them; they only have to be shown what they are, what they will do and how they do it—and then they buy. But right there is the point: They have to be shown. The farmer has always been the goat. He has been "stung" so many times that it is not all plain sailing for even the man with an excellent outfit. But after the plant is in-

stalled it is easier, and I mean it when I say I can't supply my trade fast enough with the appliances they want, after getting their outfits into operation. It is a joy for me to snap the switch the first time and see their faces light up, as the house lights come on.

"How do I sell the farmer? My method? I have always lived with or near farmers. I know their needs as well as they do. I pick my list carefully, study the characteristics of each prospect, depend upon the personal visit—always. I call and in the fewest, simplest words try to sell him on the idea of electric lighting and equipment for his needs. Once he has got the idea of it, I can go into details—the 'how-to' for installation, operation and maintenance. And I go carefully into costs, worked out to show accurately what everything will cost. By that I mean I do not sell merely some drop cord and key sockets, as I believe the farmer is not so tight as he's painted. He's proud, and when he knows what he's getting, he buys what he thinks is the best. Of course, he's a human being, and he's selfish, like all of us. When it comes to paying cold, hard cash, he wants everything he can get for his money. And remember this: The farmer is one of the wisest men on gas-engines there is; you can't pull the wool over his eyes, and woe to the man who tries. So I sell him all the appliances I can.

"Most of my demonstrations are with plants already installed. I have never had to retract, or take back anything I ever sold a farmer. Of course, the sale depends upon my being able to adapt the plant to his



Touched by America's genius for invention, a bit of iron, steel, brass, and copper became this modern farm-light and power plant. It is a splendid product. For every reliable farm plant there is a splendid market. The connecting link, as it were, is salesmanship—but the highest grade of salesmanship obtainable.

requirements. That means I've got to interpret the size of his family, his house, barns, out-buildings, and so on, and to do some pretty close figuring. But to-day, the good manufacturer or distributor of such equipment has worked out schedules and scales of prices and figures until one has very little trouble if he's careful.

#### HENS PAID FOR THE PLANT

"Let me give you a concrete case of how I have been selling farm plants on the strength of getting down to actual figures with the prospect in the past few months. I've found that after I'd made a call or two to get the farmer and his family interested, got him to read a little

of the literature and maybe ask a few cautious questions of neighbors, and when it's time to get down to facts and figures, this line of reasoning produced results: "Mr. Hoskins, I'll make you this proposition: I'll stake the cost of all my work, the operation of the plant while you try it, wear-and-tear on the outfit (which isn't much, that's true), cost of installing lights, wire, fixtures, everything—against your taking this outfit on the condition that *your hens will pay for the cost of the plant alone, the first year you've had it.*" Usually he gasps: 'My hens pay

for it alone?—why it can't be possible!' 'Well,' I continue, 'you have two pens of hens of 150 each; given the same care and attention, your electrically lighted pen will average at least two dozen more eggs per day than the unlighted. Eggs are now selling at 50 cents a dozen—or higher. Figure the profit. The only light used for this purpose will be two 15-watt lamps—burning about five hours a day—the cost not to exceed 1 cent per day. This leaves a margin covering the cost for my outfit the first year.'

"You can carry the figures as far as you like but this will show you how it's done. Of course, this argument is only used where I know the number of hens, the yield, etc., beforehand. It is this sort of appeal, or argument, adapted to the man's own farming conditions, that brings home the bacon.

"Fred B. Naylor, near Allentown, N. Y., is a farmer of the progressive type, who bought a farm lighting plant on the strength of what it



"Your hens will pay for your plant within a year." Ever make a surprising statement like that to your farmer prospect? No? Well, Mr. Young did. And the hens did what he said they would, too, at this farm of Fred B. Naylor, Allentown, N. Y. Only—take

Mr. Young's advice—don't make the statement that any kind of saving or increased production will pay for the plant until you have figured it all out and know that you are right. Then go ahead and prove it to your prospect.



would produce in the way of egg dividends.

"Mr. Naylor's hens are working on summer schedule all year round. At present he has a total of 840 white leghorn pullets. They are housed in a scientifically constructed hen house, about 120 ft. by 20 ft. deep. Twenty feet of the length is taken up as a feed house, from which the lights in the 'hennery' are controlled. The balance of the house is divided into 20-ft. square coops, each coop housing 120 hens. A feed hopper cuts each coop in half and over the center of each section is suspended a 60-watt tungsten lamp. Promptly as the sun begins to go down in the afternoon the lights are turned on, and the hens, instead of going to roost, say at 4.30 on a winter afternoon, keep on scratching, feeding and generally keeping themselves warm. And up goes hen production.

"Mr. Naylor's present lot of hens was hatched on April 15, 1918, and began to lay on Aug. 27, in four months and twelve days. A record. Until November, when the electric lights were installed, the highest day record for 840 hens was 449 eggs. From the first day of November until the 20th, as the days grew shorter, and colder, the production dropped to as low as 338 per day. On Nov. 20, the lights were turned on for the first time as night began to fall. The hens were fed at 7.30, and at 8.45 the lights were dimmed to such a point that the hens could just about find their roosts. 'Taps' was set for 9 p. m. with lights all out. This is now Mr. Naylor's regular hen schedule.

"When the lights were turned on, things began to happen. From Nov. 20 until Dec. 1 egg production rose, with 458 per day as the high egg mark for that period. From Dec. 1 to Jan. 1 the two best days' production netted 595 and 603 eggs, with an average of 557 per day for the month. The total for December was 17,280 eggs—some omelet. The total for January was 15,851, an average of 511. Mr. Naylor is so satisfied with his electrically-lighted hen house that he is installing a 170-ft.-electrically-lighted extension.

"This sort of fact and figure will convince even the most skeptical farmer. If more is needed, reference can be made to the investigations carried on by the agricultural department of Cornell University and similar departments in other

colleges. It is shown by college authorities that 100 chickens feeding in an electrically-lighted hen house laid 135 dozen more eggs in a given time than 100 chickens in an unlighted hen house. The idea of electric light is to give the chickens more time to eat, so that the following morning they will be in a better condition than they would be had their previous day's feeding been on a shorter day schedule. Try this egg proposition, but be sure of your figures first. It has helped me sell a plant many a time.

#### THE FARMER IS "LIGHTING WISE"

"It isn't such a job to sell the farmer the idea of electric illumination," said Mr. Young. "Nearly all progressive farmers know about it, want it and intend to have it some day. The farmer is aware that the kerosene method is the dangerous method; he knows all about 'fire-risk'—ask any of the old lightning-rod peddlers. And I don't think the salesman need waste much time on this score. But there are other things. In addition to the question of lighting paying its way in the hennery, there's the question of lighting of the dairy farm, the stock farm, and other 'specializing farmers' places.'

"I sold an outfit to a man and one day when I went out to see him he took me into the cow stables and said: 'I tell you, electric lights are the finest thing in the world when the little calves come. We have a light burning all night when one is expected, and the next morning when we come to do the chores we find the little fellow taking his breakfast and as comfortable and happy as a calf can be. The light enables the mother to take care of the calf so he won't get lost among the other cattle. We use only a gallon of fuel a week, and have all the lights we can use.'

"I have had farmers' wives tell me what a wonderful thing electricity is in improving their living conditions. The influence of electricity upon the farmer's family cannot be overestimated. After you've sold them on the lighting idea then you've more than paved the way for appliance sales.

"And, by the way, I find that farmers are keenly interested in the question of pumping water. The farmer wants running water if he can get it. That means a pressure

system, which in turn means an electric motor. Usually the first appliance bought is an electric washing machine. Most farmers cannot send out their washing as the city man can. And the women dislike the job exceedingly. A motor does the trick—and means a nice sale to the contractor. Of course, care must always be taken in the beginning not to underestimate the prospect's requirements as it is easy to furnish an outfit that won't come up to all the expectations.

"There's an almost virgin field for appliances—and more so for power apparatus, small motors for churn, milking machine, cream separator and so on. I sold an outfit to a farmer who had been sending his milk to the creamery, losing a long profit. He bought because he could install a churn, make and sell his own butter at fancy prices. They have a new incubator that is claimed to hatch 85 per cent of fertile eggs—an electric outfit, too. This coupled with the pay-a-profit value of light in the hen house is bound to sell to chicken fanciers. And in grain farming, and stock raising, such electrically operated devices as root-choppers used in feeding cattle, hay-cutters, feed-mills, alfalfa cutters, all motor driven, are coming into use rapidly.

"Why, when you consider the possibilities for an electrical contractor going to the farmer as does an efficiency engineer to the manufacturer—and showing him when, where, how and why electrically operated apparatus and appliances will increase his profits, cut down his labor, help him retain his help, keep his son and daughters on the farm—there's no end to the progress you can make. Electricity does increase farm production. Take running water for instance: More water will fatten hogs and cattle with less feed and it will increase milk production—which means more profits. And the farmer will want running water tomorrow—if he doesn't insist upon a water-system when he buys."

#### WHAT TO REMEMBER WHEN GOING INTO THE FARM-LIGHTING BUSINESS

Mr. Young is convinced that there are certain essentials which the contractor or dealer should consider carefully before he decides to go into the farm-lighting business. Here they are:

"It should not be expected that every dealer will make a big success in selling right from the start. The longer he has been in his community, the better. He should be well known and favorably looked upon. Farmers are suspicious of strangers.

"A location for office or store is not so necessary as having plenty of responsible, representative people ready to vouch for you. The best place to sell and make demonstrations is right on the farm. The dealer whose show room is on his prospect's property will do as well as anybody.

"Connection with the right manufacturer is imperative. No reputations are made with inferior products.

"Once you have the backing and the right product, then comes the question of taking a profit. Remember, there are three profits to the sale: (1) The profit on the plant, (2) the profit on the wiring and fixtures, and (3) the profit on appliances and apparatus. Nowadays a \$300 plant is not much of an outfit. The systems I sell run from \$500 to \$600 with battery capacity running from 80 amp.-hr. to 180. I find it just as easy to sell the higher priced outfits as the cheaper ones—and with each of the more expensive I feel certain of later orders. I do not oversell any prospect; that's poor policy no matter how you look at it.

"As to the possibilities, what one ought to sell in his own territory, I might say that in the Philadelphia territory of the company I represent there are salesmen earning from \$100 to \$150 every week in commissions. I have sold six outfits in a week without much trouble. S. Matson, in Davenport, Ia., sold eight plants with wiring and fixtures in one week; C. E. Walters of Ottumwa, Ia., sold eleven outfits in one week; the Electric Construction & Machinery Company, of Rock Island, Ill., is reported to have sold sixty-two complete plants between May 1 and Oct. 27, 1916. Farmers of Scott County, Iowa, bought over sixty outfits in six months—two years ago. And in 90 per cent of the sales there is no competition on the wiring jobs."

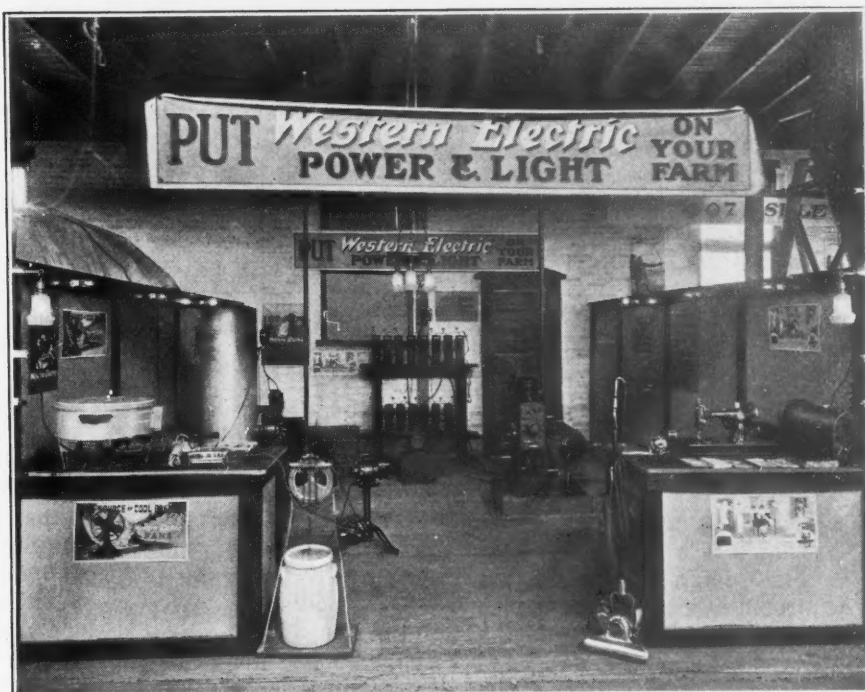
All of the foregoing remarks by Mr. Young explain the how—when—where—and why of his methods of selling farm plants. Other dealers, in discussing these essentials in selling to the farmer, agree with Mr. Young

in many respects and also bring out certain other points to be remembered by the dealer.

It is interesting to note the statement of one dealer. He said that he could tell the number of farm lighting prospects by the number of farmers who own Ford cars. There have been over 1,000,000 Fords sold to farmers—it is claimed—and with 750,000 cars of other makes, this shows a generally large country-wide prospect field. It is estimated that there is a logical market for 2,000,000 lighting plants to farmers, or one-quarter of all farms. Against

tion of the units and batteries. It is, of course, advisable to locate the plant nearest to the heaviest load, which is usually the house-lighting. The shelving for the batteries should be sufficiently heavy. Wiring tables are furnished by the lamp companies, and in "Standard Wiring Practice," so that there is little excuse for going wrong.

Try to sell an installation complete, including fixtures and everything, in every way up to standard city practice. Wall switches and base-board or convenience outlets are appreciated by the farmer. Show him



Carry the plant to the farmer. One way to do it profitably is to demonstrate it effectively to as many prospects as possible with as little lost time as possible. This is an exhibit held at the South Florida Fair, Tampa, Fla., on Feb. 17-24, 1919, by the Atlanta house of the Western Electric Company.

this is to be put the estimated number of farm lighting plants in use, 300,000, and a certain number of farmers who use central station service.

To win farm lighting business it is necessary to go out after it. Demonstrations pay dividends. The place to do the selling and the demonstrating is on the farm—in the farmer's house.

Care must be used in differentiating between outfits for plain lighting duty and those for heavy power use.

Dealers should determine beforehand how to make proper installation. A good foundation for the generating unit should be provided. Thought should be given to the loca-

tion of the units and batteries. It is, of course, advisable to locate the plant nearest to the heaviest load, which is usually the house-lighting. The shelving for the batteries should be sufficiently heavy. Wiring tables are furnished by the lamp companies, and in "Standard Wiring Practice," so that there is little excuse for going wrong.

There have been listed about 118 uses to which electricity can be put on the farm. Of course, farmers will not find it economical to install all the equipment necessary for these uses, but the dealer should know all of them.

Advertising will make the best salesman's work better and easier. Advertising may well be used in the newspapers, the mails, the local movie theaters, on boards, road-signs, at county fairs, etc. The manu-



facturers' sales-helpers are invaluable in this respect. Literature to pave the way for the salesman, also something that he can use in his presentation and something that can be used to follow up his calls, are advisable. Testimonial letters pay well. The farmer will read a longer letter than the city man, but it must be interesting and full of "meat." Pictures, and especially colored pictures, have a large appeal. The best results usually come from winning over the wife on "convenience and comfort" features—freedom from lamp cleaning, drudgery of day-break household labors, etc.—and by appealing to the pocketbook of the farmer.

Many farmers buy because they have a new barn, or the question of fire risk is on their minds. When a farmer buys because of his wife he is usually a quick sale for many different household appliances.

Questions of price or quality will

crop out. The best illustration is to use the analogy of the motor car and the gas engine with which almost every farm lighting prospect is now so familiar.

Don't forget first to "sell the idea" of home lighting and power, then cover the mechanical details.

Submit your proposition in complete form, neatly gotten up, and the less "legal looking" the better. Make it easy for the prospect to understand; to say, "Yes."

Don't overlook the value of service. Frequent calls on your customers to make sure everything is all right sell additional devices and material. Give quick attention to complaints. Nearly every successful salesman will tell you it is easy sledding after the first few plants are hooked up and working well. Many have farmer customers who will travel around to see other prospects for them.

Try it—and success to you!

which is a point of extreme importance in electrical work which remains installed for years without attention.

2. He has a store where the customer can pick out the fixtures to suit himself and not be disappointed by getting what he paid a cheap price for.

3. He can give sound advice as to the number of lights and outlets needed in every room.

4. He knows where to place his outlets to give the user the greatest possible convenience so that job does not have to be done over.

5. He follows conscientiously the safety rules of the underwriters, giving a generous protection against fire.

6. He carries an ample stock of materials so that the job is never delayed.

7. He employs careful workmen who do not damage flooring, woodwork or anything else.

8. He guarantees his work and his materials, and his guarantee is worth something.

9. He has a place of business where he can be reached in case anything goes wrong or additional work is required.

The main reason the public patronizes "the pirate" is because the public does not realize these things. The public will never know unless the public is told, and the cheapest way to tell the public is through honest advertising.

#### BUILDING A REPUTATION FOR HONEST SERVICE

Just to cite an example, the public prefers trade-marked goods to nameless goods because the trade-marked product has a reputation, strengthened by advertising, for honest goods, and the maker's guarantee is depended on. The contractor-dealer can establish himself locally in a similar way by building a reputation and strengthening it through advertising.

The advertising need not be confined exclusively to reputation building. Every store will want to advertise what it has to sell, but every advertisement should say something of the reasons why the public should patronize it and some advertisements could profitably be devoted to this subject. A slogan expressing the idea could be used to advantage in all advertisements. But remember the importance of keeping this slogan alive in the minds of the public.

## How Advertising Helps

BY SIDNEY NEU

Editor of *Westinghouse Contact*

THERE is never a gathering of contractors and dealers without a defamatory discussion of "the pirate." Certainly, prices should be maintained, wiring jobs should be figured with ample allowance for overhead and profit, but it can't be done—"the pirate" gets the business.

The pirate, according to the Standard Dictionary of Electrical Terms, is a third-rate wireman calling himself an electrical contractor, having an office located in his Truly Warner, who buys some of his materials second hand and steals the rest, considers the underwriter's rules as a thing to be avoided if possible and evaded where necessary, skins the job to the bone and hasn't even sense enough to make a profit out of the extras, and whose shoestring is just sufficient to keep him two jumps ahead of the sheriff—for awhile, but only for a little while.

Should this delectable individual really cause worry to a legitimate business man? Is he so strong that the legitimate contractor must descend to his level to stay in business?

Although it is not generally known, there are or have been "pirates" in every line of business. When John

Wanamaker started in business there were hundreds of peddlers in Philadelphia. Did John follow their tactics, selling his wares for as much as he could get? He did not; yet John Wanamaker grew and the peddler quit. We still see occasionally itinerant vendors of collar buttons, shoelaces and suspenders, yet the legitimate haberdasher can afford to pay his rent. The legitimate clothier is prosperous in spite of the bargain sales of the department stores.

There are obvious reasons why these legitimate stores survive their pirates. They have something to offer which the public values that the pirate cannot give, and they impress this on the public continuously by advertising. Their advertising creates so much business that there is plenty for them after the pirate has snooped off his little chip.

#### WHAT THE LEGITIMATE CONTRACTOR OFFERS

The legitimate electrical contractor-dealer, if he is really "legitimate," has something to offer that "the pirate" cannot give:

1. He gives honest merchandise and materials, the best obtainable,





"I don't want a lighting plant unless it is big enough to do the work," exclaimed Mr. Jones of the Jones Brothers 5000-acre ranch, Raymond, S. D., when a salesman of the Black Swan Company, Waseca, Minn., called on him. It was a problem. The

house was 1500 ft. from the large barn with more buildings 1500 ft. further away and other buildings scattered in between. A 32-volt system would not do for this job, so they purchased a 110-volt plant with a fifty-six-cell storage battery.

## Farm Labor—His Problem and Your Opportunity

Because of the Scarcity of Farm Workers Farmers Need Light and Power Plants,  
Accessories and Appliances—The Money to Pay for Them  
Is in Their Pockets—It's Up to You

By FRED B. RAYMOND

**W**HEN the short-sighted business man reads in his evening paper that wheat is selling at more than \$2 a bushel, he groans because the price of bread is high.

When a far-sighted business man reads about the 1,000,000,000 bushel crop of \$2 wheat, he begins to figure out what he can sell to the farmers who have all this money in their pockets.

As a class, the richest people in America to-day are the farmers, and they are going to get richer each year for the next five years (barring serious crop failure) because it is going to take five years to get the world back to normal agricultural production.

But with all their prosperity, our farmers face a great and growing problem—the problem of labor.

How will that problem be solved?

Obviously by labor-saving machinery, by the farm tractor and the farm electric power plant.

The first of these solves the labor problems of the field—the plowing, harrowing, seeding, cultivating and reaping.

The second solves the labor problem of the home and farm buildings—the washing, ironing, separating, churning, grinding, feed cutting, wood sawing, pumping, threshing, stacking, repair-shop work, and the thousand and one chores formerly done by the housewife and the hired help.

Nothing can be plainer or more obvious than these two facts. The farmer *must* have labor - saving

equipment, and he *has* the money to pay for it.

What are *you* going to do about it?

Are you going to sell farm power plants?

Or are you going to complain that agents who do sell them are "stealing" your business?

Are you going to reach outside your town limits for farm-wiring business?

Or are you going to allow someone else to have it—or, worse, allow the farmer to put in his own equipment?

Are you going to advertise and sell appliances suitable for farm use?

Or are you going to literally force the farmer to buy appliances from peddlers or by mail?

It's up to you.

Many men commit the error of thinking that a dealer must be in a "farming community" to sell goods to farmers. This is only half true.

Would you call New York City a "farming community"?—or Buffalo?—or Cleveland?—or Detroit? Yet within an hour's automobile ride

of any of these cities there are many hundreds of farms that cannot be served by central stations.

Nose around a bit and you will find a big, prosperous farm implement concern in every metropolitan center.

Go deeper and you will find an up-and-doing tractor agent with probably more business than he can take care of.

Pick up the telephone directory and you will locate the man who is getting rich right now by selling farm power plants.

The modern farmer doesn't hitch up the old gray mare to a springboard and drive to some little cross-roads community twice a season—not any more. He slides in behind the wheel of an auto and honks to the big city at least once a week.

They come by hundreds into Chicago and Minneapolis and St. Louis and Omaha—into any center you may mention—by auto, by interurban trolley and by train.

Without doubt perhaps the most important and timely message to the electrical trade this month can be summed up thus:



What the binder is to the harvest field the electric light and power plant is to the farm buildings and the work done therein. For the men who sell farm plants there is waiting as sure a reward as that which has been won by the men who have made and sold the binders.

The farmers need farm power plants, wiring, accessories and appliances, because farm labor is their problem.

They have the money in pocket to pay for them.

They do not necessarily restrict their purchasing to rural communities, nor to agents who drive to their doors.

They are, as a class, ready to do business on a business basis with anyone who earnestly and intelligently tries to do business with them.

Farm power plant selling is not what even an enthusiast would call easy. It takes brains, equipment, and the hardest kind of work.

Farm wiring jobs do not wander into your shop unchaperoned. They must be fished for with the right bait and tackle. Incidentally, the man who seeks such business must consider carefully what policies will win the co-operation of agents who are selling plants and who consequently control many of the wiring contracts.

Farm appliance business is not

non-competitive. Low-voltage flat-irons, incandescent lamps, vacuum cleaners and the rest are peddled through the country from flivvers and are delivered by parcel post on every rural mail route.

Do these difficulties, does this competition, discourage you?

Then do not complain of agents and the catalog houses. If they are smart enough and aggressive enough to get the business, and if the electrical trade cannot grasp the opportunity, it is our own fault.

The opportunity is there.

# Profits in Selling Appliances to Farm-Plant Customers

Some Traits of the Farmer That Are to Be Kept in Mind—Selling Appliances When He Buys Lighting Plant and Selling Them Later—How City Sales Ideas Are Varied to Fit Country Conditions

**F**ARM-LIGHTING plants must be sold. It takes intensive selling to move them. Electrical appliances to be operated by the plant will almost sell themselves. Yet comparatively few farm-plant dealers, although they recognize this situation, are taking full advantage of their opportunity to make extra profits from farm-plant accessories. The few who

are taking advantage of the demand for devices have a real story to tell. It is a story of increased volume of business, longer profits, more friends and better satisfied customers.

And why wouldn't it be? The Domestic Engineering Company, Dayton, alone did \$2,000,000 worth of electric appliance business in 1918 through its own agents, it is said.

Besides this, electrical jobbers also sold goods to those same agents. And further, the agents of perhaps 100 other farm-plant manufacturers were abroad in the field where it is only fair to assume that they, too, sold appliances. The market is there. Some live dealers are supplying it, still others can get into it with profit.


That is the reason for this article.

**DELCO-LIGHT PRODUCTS**  
THE DOMESTIC ENGINEERING COMPANY  
DAYTON, OHIO

Mr. John Jones,  
Blacksville, Ohio.  
March 10, 1919

Dear Sir:-

There is no home quite so happy -  
As that home where boys and girls are growing up to young manhood and womanhood -  
Content to live and work on the farm - putting their hearts and their strength into their labor - because it is home.  
It is worth while, isn't it, to make the farm home so attractive and to make the working conditions so pleasant -  
That there will be no temptation for your boy or your girl to leave the farm, for a pleasanter job in the city?  
That's what Delco-Light does - makes living conditions in the farm home as pleasant as they can be found in the city - and takes the drudgery out of the work about the farm home.  
Ask us about Delco-Light and how it will help to make your home the most attractive place in the world for your young folks.  
Sincerely yours,  
Delco-Light Dealer.




**DELCO-LIGHT PRODUCTS**  
THE DOMESTIC ENGINEERING COMPANY  
DAYTON, OHIO

Mr. John Jones,  
Blacksville, Ohio.  
March 10, 1919

Dear Sir:-

A modern home in the country -  
Means more than just the comfort and enjoyment that modern conveniences bring.  
It means electric service - electric light and power, tireless servants to serve you at the touch of a button.  
Electric light means safety, convenience, time and labor saving, an honest pride in the possession of a really modern lighting system.  
Electric power will pump the water, for the household, for the stock, for fire protection. It will turn all the cranks for all the jobs that somebody must now do by hand.  
Delco-Light brings you electricity, makes your home modern and gives you the aid of electric service, quickly and at low cost.  
Mail the card and let us tell you about it.  
Yours very truly,  
Delco-Light Dealer.







**DELCO-LIGHT PRODUCTS**  
THE DOMESTIC ENGINEERING COMPANY  
DAYTON, OHIO

Mr. John Jones,  
Blacksville, Ohio.  
March 10, 1919

Dear Sir:-

One of the first things -  
Necessary to a home is a good supply of pure water.  
In the modern home, it is almost as necessary to have that water supply piped to convenient points - so that it can be had in an instant, just by turning a faucet.  
A modern water system, operated by Delco-Light will give you conveniences such as the modern bathroom, hot and cold water, there and at the kitchen sink -  
Water for the stock troughs at the barn, for fire protection and all the other uses for water about the country home.  
Let us explain to you about this water system and the operation by Delco-Light - about how it will relieve your wife and others of the family of the burden of carrying water and how it will add to the comfort and convenience of your home.  
Yours sincerely,  
Delco-Light Dealer.

After a ten-hour day at soliciting and driving in the country it is not an easy job for a farm-lighting plant dealer to write snappy, appealing letters to keep his prospects interested. So that is why the Domestic Engineering Company, Dayton, Ohio, has issued a dealer's folder containing five letters of which three are shown here. All are issued on colored stationery except the

first one in the series, which tells in interesting detail what 1 cent's worth of electricity will do on the farm. The other four letters take up the advantages of a water system, how to keep the children happy on the farm, lightening the labor of the housewife, and the fifth summarizes the conveniences of electric service of all kinds on the farm.



— the foregoing letters prove that **DELCO-LIGHT** makes an average weekly saving on farms as follows:



These are the two summarizing pages of a booklet prepared by the Domestic Engineering Company, Dayton, Ohio, for the use of their salesmen who are selling farm plants. Each of the silhouettes shown above is based on a letter reproduced in the

—Brought Forward— 8½ hrs.



Total Average Saving **14 hrs.** per week at 30¢ per hour amounts to **\$4.20** per week or **\$218.40** per year.

You would be justified in installing Delco-Light purely from the standpoint of the added comfort and conveniences which electricity makes possible on the farm.

But leaving these features out entirely—and looking at it from the time and labor-saving standpoint, you cannot afford to go longer without the benefits of Delco-Light.

**Install DELCO-LIGHT because**  
**"It Pays for Itself"**

foregoing pages of the booklet and accompanied by illustrations of the farm buildings, the owner, and the installed plant. This is a unique method of bringing to a focus all the arguments of the preceding letters.

How shall dealers market electrical appliances to the farmers? The best way to show that apparently is to tell the experience of dealers who have been successful at it.

Dealers agree that the first thing to learn is *how* to sell a farmer. As one of them expressed it, "You might go into a city man's office with a cigarette in your mouth and yet come out with an order. Just try that on the farmer and you will get two orders—one to get and the other to stay out! However, there is no harm in passing the eating tobacco."

That is one difference between selling the city man and the farmer. There are many others. For instance, almost no solicitor sells a farmer before he gets acquainted with him. A city man may buy from a salesman for years and never get acquainted with him. A city man buys a product because he is sold on the product itself. A farmer buys a farm-lighting plant or an electrical appliance first because he is sold on the agent and second because he is sold on the goods. The

farmer likes to feel that he has a real friend in the agent—some one to fall back on in case something unexpectedly goes wrong with the equipment. The reasons for this are quite apparent. For one thing, the farmer has never had experience with any machinery that was entirely foolproof or that was infallible. There always has come a time when his machinery has failed. Then he wants help—he wants personal attention to his particular troubles. He is accustomed to doing his business on a personal basis because he knows everyone in his limited community. He wants to do his electrical business in the same way.

When a lighting-plant agent learns these things, and when he gets acquainted with his farmer prospects he makes sales. And every time he makes a sale he makes a friend—the kind of a friend that provides him a standing invitation to stop in for dinner any day he is in the neighborhood. That is where appliance selling begins.

There is still room for argument,

however, as to the technique of handling appliance sales after the plant order has been signed. Those who argue the question are divided mainly in two groups. The first group says, "Sure, sell all of the appliances right with the plant." The second group says, "If you do that you'll jeopardize the plant order. Wait till the plant is installed. Hand 'em the accessories gradually." The first group thinks the second group are "milk-fed, weak-kneed, soft-sister" salesmen who grab their hats and run as soon as the plant order is signed for fear the farmer will change his mind. The second group thinks the first group are largely "a common, ordinary garden variety of prevaricators who don't get away with one-half the claims they make." But that is their own pet scrap, and may the best man win.

The real point in the whole argument is to get the accessory business with the plant order if it is possible to do so without jeopardizing the plant order and to get it later if it cannot be secured at that time. Some



good ideas have been worked out for bridging the gap between the plant order and the accessory sale. For example, one dealer makes a practice of writing on his accessory order blank the name of each appliance that is favorably mentioned by the farm family during the discussion that usually ensues prior to closing the plant order. When the plant order is signed he "pulls" the accessory order blank already filled out and says, "Of course you want these accessories to use with the plant," and gets the accessory order signed then if he can.

Of course there are many instances in which the desire to use the accessories sells the plant instead of the sale of the plant for light making possible the sale of appliances. Some salesmen use this knowledge to get a good-sized appliance order. After the plant order is signed and pocketed they say, "Now to make this plant a really big paying investment you ought to make the fullest possible use of it. Let it do as much work for you as it will. Let it pump the water, wash the clothes, churn the butter and sweep the floor. If you let it run only as a light plant it would be like operating a binder without a knotter." Then follows a

discussion of the power stand, washing machine, pump and other devices each in its turn. Of course, it goes without saying that every farm-lighting salesman should be thoroughly acquainted with each one of the electrical appliances that can be used on the farm. Unless he knows their advantages and can demonstrate them to the satisfaction of his prospects, he is falling short of making the most of his selling opportunity.

#### A TIP FROM THE CLOSING SALESMAN

Each of these devices is susceptible of becoming the topic of a good sales talk all by itself. Take the pump. It is easy to get any farmer's wife to admit that the family will use an average of 25 gal. of water a day. A gallon of water weighs about 8½ lb. That means 209 lb. of water a day or 38 tons of water a year that somebody must carry from the well. If the well is 40 ft. from the kitchen the same somebody must walk about 33 miles a year to carry that water. It is needless to say that the farmer's wife does most of that carrying and walking. Moreover, she does it while the farmer is occupied with his riding plow, his riding cultivator, his riding mower, his riding binder and

his other modern farm equipment. Under such an array of imposing data and such a contrast of male and female working conditions both the farmer and his wife can be made to see what a necessary little article is a motor-driven pump, which will not only eliminate that labor of carrying water for the house, but will also provide water for the stock and give a kind of fire protection that even the women of the house can successfully handle.

And when a good agent gets on that fire hazard theme he usually lets oratory reign supreme. There is one Ohio salesman with whom, as an appealer, Billy Sunday would run a poor second. He makes an average of one plant sale a day and sells many water systems with them. Fire hazard is his closer. "That little blue-eyed child—," he starts, "you want to protect her don't you, my friend? Money couldn't replace her. Why I can see her now come tripping into the barn where that lighted lantern stands on the floor." And so he paints a grewsome picture that takes the baby to the grave and leaves the home folks hear the clods of clay falling on the little wooden box. It takes an accomplished case-hardened closing salesman to do it,

**"BEYOND** a doubt, the ability to be a diplomat is the biggest asset that a service

man can have in handling a dissatisfied owner," points out L. H. Leonard, service manager of the Lalley Electric Lighting Company, in addressing Lalley dealers and service men.

"Get acquainted with the owner. Learn his hobby. Take his mind off his troubles by making reference to his farm, buildings, stock, or talk to him on topics in which you see he is interested.

"From experience we have found many cases where only minor difficulties have been encountered and the owner could have been taken care of very easily had he been properly approached by the service man.

#### CORRECTING MECHANICAL TROUBLES ALONE IS INSUFFICIENT

"An arrogant or wise air on your part in conveying to the owner that his trouble is not serious, and that it can be traced out and corrected in a few minutes, is wrong. You cannot satisfy him merely by correcting mechanical or operative faults.

"You must first gain the good graces of your man and make a thorough study of his personality.

## "Be a Diplomat"

Do not attempt an investigation until he has told his story, no matter how long or tiresome it may be to you.

"From the numerous things he will mention, you will be able to single out one or two points that have aggravated him. Perhaps other minor difficulties have added to his grievances until he feels the plant never was and never will be right. He is at the point where he believes John Jones down the road made a wiser selection in buying a plant of a different make.

"No two people can be handled alike, for that which might serve to satisfy one would only aggravate another.

#### BE A GOOD LISTENER

"Be a good listener. Then you can better size up the task of thoroughly satisfying your man and just how you are going about it.

"Listen to all his difficulties. You should question him still further on the more important points of operation and attention that are most necessary to the best workings of the plant. Do this with tact. An opportunity has been opened for you

to see any mistakes that may have been made in the installation or the care given his plant. You can

then explain just what is necessary to make any needed correction.

"In all cases, the work of a service man should be followed up in a letter by the dealer asking the owner if his plant is giving satisfactory service. This additional interest is well worth the effort.

#### COURTESY AND GOOD APPEARANCE ESSENTIAL

"A service man cannot pay too much attention to his personal appearance. Dress neatly, but not loud. Be courteous and remember that your actions form the owner's impression of the company you are representing.

"Never lose your temper, even if you are dealing with an owner who is unreasonable in his demands—in other words, a kicker. However, be firm in your stand, but above all avoid arguments.

"In conclusion, it is always best first to take the position that the owner is right in his assertions. If he is wrong, after putting his plant in perfect condition, then explain in a nice way how he was wrong. This is a good place to exercise your diplomacy."

but it gets results. That is the high-pressure method.

Another method and one that seems to be considered easier is to wait until the plant is installed, then put the appliances into the home and let them sell themselves. This is, of course, merely a variation of the free trial idea used so successfully in city selling, but it has some distinct points of difference. In the first place a machine that is left for a farmer to try is regarded by him in the same light as a "demonstrator" automobile. He thinks of it as a particular machine selected from a large factory production because it will give performance above the average. Many times he believes also it has been especially "tuned up." This attitude toward demonstrator machines reduces the problem of moving shop-worn goods, because, for example, when a farmer decides to buy a washing machine after he has tried one at home he does not want a new one out of the shop. Not at all. He wants the demonstrator. Dealers take full advantage of this condition.

Different devices lend themselves to special methods in connection with this free-trial idea. One dealer, when he is figuring the wiring, always asks: "Where do you want your iron plug installed?" He gives the customer no choice as to whether she wants an iron plug or not. It is merely a question of *where*. He always leaves an iron on the job and figures it into the bill.

Service calls provide an excuse for taking into the farm house such devices as sewing machines, vacuum cleaners and washing machines. They can usually be introduced to the housewife as "something that just came in—something I'd like to have you try out for a few days."

It is always important to find an excuse for coming back to a farmer prospect; a well-chosen method of approach that does not bore him and yet is not affected. Dealers say that if you approach a farmer with the statement that you want to sell him an appliance your chances of success are only one-half as good as if you stop in "just to give him some booklets on electrical household labor-saving appliances."

Another difference between the free-trial idea used in cities and the applications of it on the farm is that it can be used more freely in the country. This is true because credit conditions are better. Practically

any farmer that has a plant can be trusted with any electrical appliance. Some dealers make a practice of charging the device on their books against the farmer when they leave it on free trial. This method has worked out well where the dealer does his own selling. It might be a cumbersome plan where each salesman working for a dealer is supplied with one or more devices to put out on trial. The tendency is to do nearly all farm-plant and appliance business on either a cash or an interest-bearing note basis. No instalment plan of selling seems necessary. This basis of selling has advantages. The farmer is accustomed to it and it provides the dealer with bankable paper.

Another important factor in free trial propositions for farmers is that the goods shown are usually "quality" products rather than products that sell on price. It has been found that the farmer as a rule will buy a better article at a higher price rather than take a chance on something cheap. This tendency most

dealers agree should be encouraged because the farmer in his isolated position far from a source of supply or repair should be provided with devices that will be as reliable as can be. Because this policy is followed largely by farmers the machines which dealers put out as demonstrators are high-grade machines and consequently they do not show signs of usage after a reasonable trial. One agent tells of a vacuum cleaner that has been in five different farmers' homes, making a sale at each place and finally making a permanent home for itself in the fifth location.

From such expressions of experience as these the conclusion may readily be drawn that electrical appliances for the farm can really be merchandised. Agents that are awake to methods of handling them declare that one-half the volume of business is attributable to plant sales and one-half to accessory scales. Of the two classes of goods appliances are the easier to handle and carry a larger margin of profit for the dealer.

## Inject This Spirit of Service Into Your Business of Wiring Homes

BY T. H. KETTLE

I talked to a wiring contractor a few days ago in one of the largest cities in the Northwest. He explained conditions to me. "They are fierce," he said. "When people want their homes wired, they send for every wiring contractor in town and get competitive prices on the job they want done."

"On the job they want done!" I exclaimed. "Now look here, Bill," I said, "you have been in the house-wiring business nearly all your life. To a woman, wiring her house is but an unimportant incident in her life. You ought to know more about it than she!"

"I guess so," he said.

"But do you?" I persisted. "Do you tell her what color shades and how many outlets and switches to put in, or does she tell you? Now, look here, Bill," I went on, "do you really know this house-wiring game or do you only think you know it? If you know your business and demonstrate that fact, a different relation would exist between you and your inquirers—a relation that exists between doctor and patient. If you really know your business, you know the average

woman makes some terrible mistakes in her home. The outlets are in the wrong place and the switches are all too few."

"Every woman is seeking comfort, convenience and home happiness. Price is secondary, but by long experience she has determined that it is useless to appeal to you and your class on this subject and she is compelled to decide for herself. She chooses her own layout and then nails every one of you down on price! Did you ever reflect on that?"

"Suppose you reverse this. Get away from thoughts of outlets, switches and fixtures, and study up on decorative schemes, home comfort and home convenience. Know all about these subjects it is possible to know. Then when a request for a bid comes in, go and see your lady. Forget about the prospective job and talk about your real business of making the home more beautiful, more convenient and more comfortable. Create an atmosphere that will cause her to look up to you as a master of your subject and believe me you won't say, 'Conditions are fierce.'"



# Ten Glimpses of To-day's Market



1. How many farm women are waiting for your vacuum cleaners?

2. Here's your chance to install an electrically operated water system.

3. Did you ever count up the farm kitchens waiting for your electric fans?

4. And suppose farm plants were hitched up to all your electric flatirons?

5. Would these men rather milk by hand at 4 a.m. than by electricity at 6 a.m.?



## It's Your Market



# for Electric Goods in Your County



6

6. When the wind fails, who pumps water for the stock?

7. Not all the butter is churned at the creameries—not by any means.

8. In your county how many grindstones are waiting for your electric motors?

9. Ever count up the kerosene lamps that your 40-watt lamps can displace?

10. You can't sell electric washers on the farm? Don't you believe it.



7



8



9



10

## Sell to It Now

## What Size of Motor?

Farmers Will Use Electricity, if They Are Shown That an Actual Saving in Dollars Is Possible—That Means That the Right Size Motor Must Be Used—Here Is a Table to Help Find the Right Size

THE adoption of electric motor drive for the operation of farm machinery will, more than any other method, emancipate the farmer from the uncertainties of farm labor. Furthermore, electric motor drive will materially reduce the cost of production, improve the quality of the product, and pave the way to savings and economies impossible to obtain by any other method. Electric motor drive is applicable to almost every form of farm machinery used to-day and will meet conditions much better and more successfully than any other form of power.

If the farmer is connected to the

lines of local power company the applications of electricity as a form of power are very numerous, and in nine cases out of ten the farmer will utilize it if he is shown that by so doing a saving in dollars and cents may be effected. This then resolves itself into a question of the capacities of the motors necessary for operating the various machinery used on the farm.

The table shown herewith which has been prepared by the Westinghouse Electric & Manufacturing Company of East Pittsburgh, Pa., gives the sizes of motors required for various farm machinery.

Sizes of Motors Required for Farm Machinery

Machine	Motor Horsepower		Size Most Used
	Minimum	Maximum	
Feed grinders (small).....	3	10	5
Feed grinders (large).....	10	30	15
Ensilage cutters.....	10	25	15 to 20
Shredders and huskers.....	10	20	15
Threshers, 19-in. cylinder.....	12	18	15
Threshers, 32-in. cylinder.....	30	50	40
Corn shellers, single hole.....	$\frac{3}{4}$	$1\frac{1}{2}$	1
Power shellers.....	10	15	15
Fanning mills.....	...	...	$\frac{1}{4}$
Grain grinders.....	...	...	$\frac{1}{4}$
Grain elevators.....	$\frac{1}{2}$	5	3
Concrete mixers.....	2	10	5
Groomers (vacuum system).....	1	3	2
Groomers (revolving).....	1	2	1
Hay hoists.....	3	15	5
Root cutters.....	1	5	2
Cord wood saws.....	3	10	5
Wood splitters.....	1	4	2
Hay balers.....	3	25	$7\frac{1}{2}$
Oat crushers.....	2	10	5
Cidermills.....	2	5	$2\frac{1}{2}$
Clover cutters.....	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$
Water pumps.....	$\frac{1}{2}$	5	3
Cream separators.....	$\frac{1}{10}$	$\frac{1}{4}$	$\frac{1}{4}$
Butter churns.....	$\frac{1}{8}$	3	$\frac{1}{4}$
Milking machines.....	3	5	5
Bottle washers.....	$\frac{1}{8}$	$\frac{3}{4}$	$\frac{1}{2}$
Vacuum system.....	2	3	3
Refrigeration.....	$\frac{1}{2}$	25	3 to 5
Grindstones.....	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{4}$
Emery wheels.....	$\frac{1}{4}$	1	$\frac{1}{4}$
Lathes.....	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Forge blowers.....	$\frac{1}{10}$	$\frac{1}{8}$	$\frac{1}{10}$
Sewing machines.....	$\frac{1}{40}$	$\frac{1}{30}$	$\frac{1}{30}$
Buffers and grinders.....	$\frac{1}{40}$	$\frac{1}{30}$	$\frac{1}{30}$
Portable vacuum cleaners.....	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{8}$
Large ice cream freezers.....	$\frac{1}{8}$	2	$\frac{1}{4}$
Washing machines.....	$\frac{1}{8}$	2	to $\frac{1}{4}$
Centrifugal dryers.....	1	2	1
Mangles.....	$\frac{1}{4}$	1	$\frac{1}{2}$
Meat grinders.....	$\frac{1}{4}$	$\frac{3}{4}$	$\frac{1}{2}$
Sausage stuffers.....	$\frac{1}{4}$	1	$\frac{1}{2}$
Water pumps.....	$\frac{1}{4}$	1	$\frac{1}{2}$

Of course, no farm plant salesman would buy a straw hat three sizes too large or too small for his head. Yet the same salesman might sell a farmer a motor too large or too small to do the work for which a motor is necessary. The best salesman picks the right sized motor for the job. Better tuck this table into your vest-pocket right now.

The table includes more electrically driven farm machinery than is usually found on the average farm. On a well-equipped average sized dairy-farm, mixed farming, and small stock-raising farm, say of 100 to 150 acres, the following machinery will probably be found:

**Barn Equipment (heavy duty):** Corn sheller; feed grinder; fodder and ensilage cutters; hay hoist; hay press and baler; threshing machine; cider press; wood splitter and sawing machine, all of which are heavy duty machines required at different times of the season, so that a single motor large enough to do the heaviest duty, mounted on a skid or truck, will do all the work and keep the investment at a minimum. A 10-hp. motor with its overload capacity will perform work equivalent to a 15-hp. gasoline engine.

**Barn Equipment (light duty):** Grindstones; emery wheels; bone grinders, etc. These are usually located in a repair shop and can be driven by a small motor connected to a shaft. Water pump, spraying machine, fanning mill, milking machines and groomer should have individual drive.

**Dairy Building Equipment:** Milk cooling pump, cream separator, churns, butter worker and refrigeration system can all be driven from countershaft with a motor of sufficient capacity to run any two machines on full load at the same time, or by individual drive if preferred.

**Residence Equipment:** Meat grinder, sausage stuffer, ice cream freezer, washing machine and mangle can be arranged for driving by one motor connected to countershaft, the motor to be large enough to run the largest machine fully loaded. Vacuum cleaner, sewing machine, buffer and grinder and residence water pump should have individual motors either belted or direct connected.

On farms raising considerable poultry, electricity can be used to good advantages for heating brooders and incubators. Often, too, the farmer finds it of advantage to employ electric trucks, if he is on the line of the local power company. He can charge these trucks himself by installing a battery-charging set with switchboard. An electric motor mounted on skids or a truck will do many of the barnyard chores in a small fraction of the time it takes to do them by hand. And so it is all down the line; sort out the different kinds of work that have to be done on the farm and it will readily be seen that these items can be disposed of by means of relatively small motors.

An advantage in driving barn and field machinery by electric motors is the fact that the power is instantly available. The motors required are light in weight and can therefore be installed without special foundations.



# Bureau of Education and Research

The National Association of Electrical Contractors and Dealers Announces the Organization of a Bureau for Development of Modern Electrical Retail Shops

**T**HE PLANS for the new bureau of the contractor-dealers' association ought, if carried out, to put into the field a useful additional force for the making of retail electrical merchants and the education of contractor-dealers in business principles. Any newcomer in the ranks of the forces already lined up to advance the merchandising purpose, deserves the welcome and approval of all who have the welfare of the industry at heart.

It is admitted that the new bureau, as described below, is so far but a bare outline of a big idea. To make it concrete and a factor in the trade, a lot of hard work is ahead. Manufacturers, central stations and jobbers will have to be made to see the benefits of becoming subscribers to a contractor-dealers' body. Some, indeed, will have to be shown how the purposes of the bureau differ from those of organizations already at work. And the creation of a capable staff, and its administration under the proposed diversity of activities will involve some very particular skill. But the launching of the bureau idea by the contractor-dealers shows how earnestly the new national association is beginning to tackle the problems of its membership and its industry. Following eighteen months after the New Orleans convention, it is surely the association's step No. 2 in the realization of a great merchandising plan.—EDITOR.

**T**HE National Association of Electrical Contractors and Dealers, through its general manager W. H. Morton, has announced the organization of the Bureau of Education and Research—a bureau for the collection and compilation of data and statistics to show what is needed to increase the retail distribution of electrical merchandise, to place this distribution on a more efficient basis, and to put this information before the industry, so that through local coöperation the desired results shall be brought about.

The official announcement of the association, after giving the name of the new organization and stating its purpose as indicated in the foregoing paragraph, is as follows:

#### COMMITTEE IN CHARGE

W. Creighton Peet, Peet & Powers, New York City, national chairman.

M. Edwin Arnold, M. E. Arnold & Company, Philadelphia, chairman national membership committee

A. Penn Denton, Economy Electrical Construction Company, Kansas City, Mo.

#### OBJECTS

To collect from all sources information relative to the best methods of improving and increasing retail distribution.

To place this information before the industry in various localities,

and through local effort to urge all those now engaged in the retailing of electrical material to increase their efforts and to conduct their business along economical and efficient lines, and especially to endeavor to get contractor-dealers who are not retailing to develop this branch of the business—to the end that retail distribution will be increased and the contractor-dealer will be placed on a more stable basis.

To give retailers through printed matter and personal visits, the information which they evidently need to enable them to conduct their business on recognized business lines.

#### METHOD OF OPERATION

The work of the bureau is to be carried out by obtaining in the various localities throughout the country co-operation between the manufacturers, jobbers, central stations, and retailers, so that all branches will be working together to increase the retail distribution of electrical material.

The preparatory work is to be done through suitable printed matter, laying out the aims and objects of the work, and what is necessary to accomplish the results.

This is to be followed by personal field work in the various localities, which primarily will be for the purpose of getting together the parties interested and directing their efforts toward the results desired, so that

all sections of the country will be working to accomplish the same end.

The foregoing work is to be supplemented by a series of lectures on the following subjects, each lecture being written by specialists in the line treated, such as management; selling; accounting; estimating and installing. These lectures will be prepared complete by the bureau in such form that they can be furnished to any locality, but the entire arrangement for and delivery of the lectures to be under local supervision and at properly advertised open meetings. The recent lectures on cost accounting and estimating have demonstrated the need and value of such lectures. Where the circumstances do not warrant the delivering of the lectures, the subject matter will be furnished in printed form to the retailers in such territory.

#### FIELD WORK

The work of the field men for the bureau will consist of calling on the various interests in the electrical industry in the different localities for the purpose of getting them to work together on a broad coöperative plan to improve the distribution of electrical material in their territory. The field men will also be prepared to show the retailer when requested, how to improve his store; how to improve his business methods along economic lines; how to install and carry on proper cost accounting and bookkeeping systems; and to take up any subject on which assistance is requested.

#### FINANCING

While it is felt to be necessary that this work be carried on by the retailers' organization, it is recognized that the retailers are not in a position to finance this educational work at the present time, unaided, and for this reason, financial support is asked from manufacturers, jobbers, central stations, and others interested in obtaining the results outlined.



As subscribers will be directly benefited by the increased sale of resale material and current consuming devices which will be produced by the work of the bureau, they are asked to subscribe on a yearly basis, a sum approximately equal to 25 cents on each thousand dollars worth of sales of such resale material, or in the case of the central station, the sale of current, with a minimum subscription of \$50 per year, and a maximum subscription of \$10,000 per year, excluding sales of material for export and any sales to governmental or state departments. The amount of the individual subscriptions will not be made public.

The money contributed to the support of the bureau will be expended by and through the National Association of Electrical Contractors and Dealers with the understanding that part of the expenditures will be for general work covering the entire country, and part will be on special work in the different localities in proportion to their numerical membership in the national association; resulting in each locality receiving benefits from the work in proportion to the activity and interest shown by those concerned in the industry in such locality.

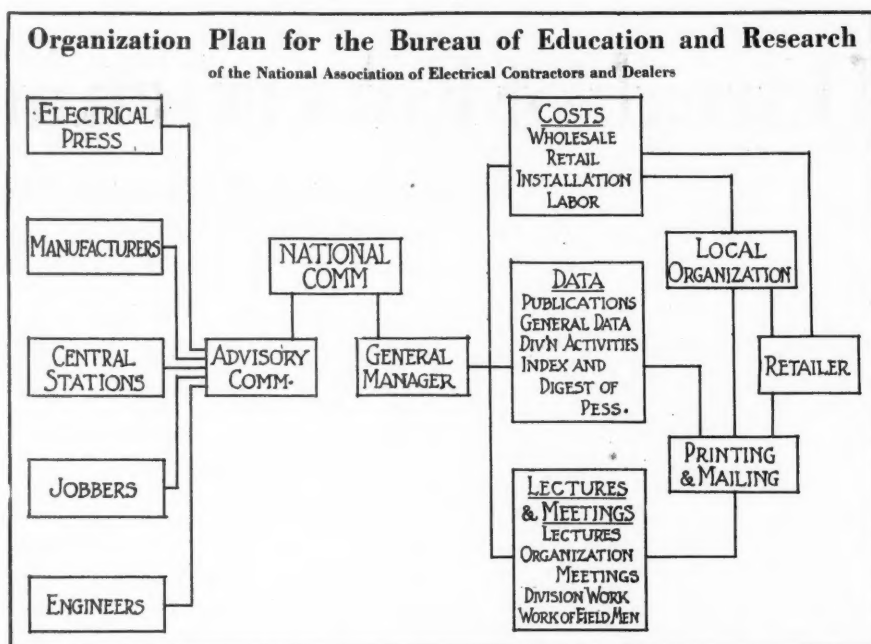
#### PRIVILEGES AND RESPONSIBILITIES OF SUBSCRIBERS

All subscribers to the Bureau of Education and Research will be accorded all the privileges of associate members of the National Association of Electrical Contractors and Dealers; that is, the right to attend meetings and participate in all discussions, and to receive data and information, it being distinctly understood that subscribers exercising any or all of these privileges do not take on the characteristics of membership or assume any liability for acts of the association.

A list of subscribers, without naming amount subscribed, will be distributed and the representatives of subscribers will be welcomed at all meetings of the national association or of any of its branches.

#### ADVISORY COMMITTEE

There will be an advisory committee consisting of representatives from each branch of the electrical industry; namely, the manufacturers, the central stations, the jobbers, the engineers, and the electrical press, to be selected through consultation with the subscribers from each branch. Matters of policy will be



To show what groups within the electrical industry are concerned in the new Bureau of Education and Research, how these groups are related, through whom they will function, what work is planned, and how it will reach the electrical retailer, this chart was prepared by the National Association of Electrical Contractors and Dealers.

passed on by this advisory committee before being finally acted on by the managing committee.

#### MANAGEMENT

The management of the bureau will be under the direct control of a committee of three members of the National Association of Electrical Contractors and Dealers, the national chairman being a member and the chairman of this committee.

#### RESULTS TO BE OBTAINED

It will be seen that the work of the bureau is primarily devoted to the education of the contractor and retailer, so that they will appreciate the importance of actively increasing the retail distribution of all kinds of electrical materials, and improving their business methods.

The work will further result in the stabilizing of the contracting business of the country by inducing contractors to operate retail stores requiring a fixed permanent investment in their business.

The increase in the number of retail stores, the education of the retailer to properly handle appliances, and the increase of suitable wiring for the use of appliances, must of necessity increase the sales of materials, and through the sale of current consuming devices increase largely the use of current.

#### USE OF FUNDS

It should be especially noted that the funds for the bureau are not to

be applied to regular work of the national association (which in the year 1918 cost approximately thirty-five thousand dollars, and is on a self-sustaining basis); the benefit to the national association arises from the improvement in the general business conditions of the electrical contractor-dealer, and the increase in membership which will tend of itself to improve, increase and stabilize distribution.

### Electrical Men of District of Columbia Organize

More than 100 electrical contractors, dealers, jobbers and central station men, at a meeting in the Potomac Electric Power Company building on March 31 organized a branch of the National Association of Electrical Contractors and Dealers.

Temporary officers were elected as follows: J. C. McLaughlin, chairman; L. D. Carroll, secretary, and J. R. Galloway, treasurer. The membership committee is composed of H. P. Hill, O. R. Evans, H. P. Foley and J. D. Campbell.

Addresses were made by W. L. Goodwin, author of "The Goodwin Plan"; T. L. Townsend, of the National Electric Supply Company; D'Orsey Smith, of the Consolidated Electric Light & Power Company, of Baltimore; and W. H. Morton, general manager of the National Association of Electrical Contractors and Dealers.

# "Jim, These Farmers Need You," Urged Uncle Jerry

When Farm-Lighting Agents Are Trying to Sell Their Plants, the Most Natural Thing for a Farmer to Do Is to Drive to Town and Ask His Local Electrical Contractor Friend About the Merits of a Farm-Lighting Plant. Here Is a Method by Which Contractors Can Co-operate with Agents to the Advantage of Everybody Concerned

By FRANK B. RAE, Jr.

**S**HAKE HANDS with Uncle Jerry Stackhouse. He's worth knowing—honest, he is. When I first met him I'd an idea Uncle Jerry's chief occupation was sitting on a soap box near the egg stove in the cross-road store and whittling soft pine slivers. Maybe he does sometimes, but when I discovered that Uncle Jerry has a brain that works like a hair trigger, a fondness for things electrical and electrical folks, and has a dainty half million dollars tucked away on ice—well, I just worked his hand like a pump-handle. Wouldn't you?

Frank Rae introduced us to Uncle Jerry. Rae, you know, was the chief historian of "The Brass Tack Brigade" in the days when ELECTRICAL MERCHANDISING was young and tender. Recently in France Rae with an old shootin'-iron went over the top and got himself a Hun. Now he is home again. How he happened to run across Uncle Jerry I don't know, but Rae says the old man knows a whole lot about things electrical these days. And Rae—well, you ought to see the sparks flying from his typewriter. Here's his first story.—EDITOR.

**W**HEN Jim Lowden went to Uncle Jerry Stackhouse to get the old man to back him in an electrical contracting business, he went just as he was, without any dressing up or smoothing over. Jim was a mechanic and was proud of it. The grease on his overalls, the grime on his hands, were to him the honorable badge of an honest workman. Jim affected to despise white collars and shoe polish, and he'd have offered to fight you if you suggested a manicure. So he went to Uncle Jerry just as he was.

Jim put his proposition to Uncle Jerry in good, clear United States English. He had studied the situation pretty carefully and knew that there was a good chance for an industrious, smart man to make money in electrical contracting in Robbins-town. He had the figures to show how much local work was being done by contractors from the county seat, and how much by a couple of local factories that hired men by the day instead of turning their work over to a contractor.

And then, Jim himself is a mighty good man to gamble on. He is, as I have said, a first-class workman; but besides that he is ambitious, had put himself through school and worked his way through a couple of correspondence courses. He is one of those hard-jawed, wide-eyed, two-fisted young fellows who somehow give you the idea that they are going



"By the way, Summers," he said, "what about the wiring of your building? Is the agent of this outfit going to do that? Seems to me a rather bad deal to have this fellow butt in and not only sell you a plant but take wiring business away from me as well." "Why, no," replied the farmer, "that don't seem hardly fair, does it?"

to "amount to something." If Jim had come to me for money, I'd have loaned it to him on his unindorsed note. That's how well we think of Jim.

Uncle Jerry heard his story, nodded his head, and then said in that gentle little voice of his:

"Jim, here's \$5. You go over to the Eagle Hotel and get a room and bath. Send a boy home for your best clothes. After you've spent the morning getting a haircut and a

shave and spruced up all over, come back and I'll listen to you."

Whee-ewe!—but Jim was mad! He was so mad he didn't remember to give back the \$5 bill that Uncle Jerry had put in his hand. He just slammed out of that office and stamped down the stairs, and kicked Tony Mullati's brindle pup that was snoozing on the door step.

So while Jim pulls on his Sunday trousers and slicks up his hair, let me tell you about Uncle Jerry Stack-



house. Uncle Jerry is one of those pleasant, apologetic little men, neat as wax, soft of voice, and with no particular business. He's worth, at a rough guess, about a million and a half, but nobody knows where it's salted down nor exactly how Uncle Jerry acquired it. Ever since we boys were kids in the old District School, Uncle Jerry has pottered around town, occasionally visiting the bank or talking confidentially with one of the merchants, but mostly he sits in the back office of the Eagle Hotel and plays checkers or talks politics—or rather, he listens to the other men talk politics, for he himself is too bashful, or something, ever to get into any arguments.

Uncle Jerry always had a small slice of everything that was promoted in the town—just enough to say he was “in on it”—and generally he was on the board of directors. I've heard my father say that “That little runt, Jeremiah Stackhouse, knows more than the President of the United States”—sometimes that isn't much—which was the reason why they always wanted him on the board.

As we youngsters grew up, we sort of drifted into the habit of going to Uncle Jerry for advice. We'd ask him whether we ought to stick to the old job in the tool works, or take a chance and go to the city to make our fortunes; and as one after another of us set up in business we'd just pester him half to death getting his ideas on this and that. He seemed to know the answer to every question and he'd tell us what to do and what to avoid, and if we got into a tight place he'd show us what sort of fool mistakes we'd made and then loan us enough money to pull through—if he thought we were worth saving.

So altogether, Uncle Jerry Stackhouse was a sort of town adviser; he was every young business man's reliable “friend in need.” I suppose he's responsible for half the successes that have been scored by the younger crowd in the last ten years, and he's still doing the same thing—interesting himself in promising young enterprises, backing fellows who have the right stuff in them, and acting as sort of business oracle for the county.

Well, Jim did just what Uncle Jerry had told him to—he got all slicked up and went back in about two hours. The old man almost kissed him.

“Jim, I want to congratulate you,” he said. “When you came in here this morning you were a dirty mechanic. Now you're a clean-cut business man. And you had the sense and the courage to learn a hard lesson quick. I'll go into this electrical proposition with you and maybe we can make a go of it. Anyway, we'll try mighty hard, eh boy?”

And that's how the Lowden Electric Company started.

#### “WHAT'S THE BIG IDEA THIS TIME?”

One day Uncle Jerry Stackhouse came bustling into the Lowden Electric Company's new store on Main Street, afire with an idea.

“Jim,” he said to Lowden, “we're overlooking something big. Of course, I'm practically out of this concern now—you've paid me back the little money I put up and maybe you'd rather I wouldn't pester you with my notions. But I feel as though you are one of my boys and I don't want to see anything get by you.”

“Fire away, Uncle Jerry,” said Jim. “Any time you come to me with a hunch I'm willing to play it blindfolded. What's the big idea this time?”

“Just this: I was just over at the bank, sitting in a directors' meetin' and passing on some loans and things. Well, Bob Summers from down Allenburg way—you know Bob; his father used to be county commissioner, and Bob's running that farm on the River Road just this side of the stone birdge—well, Bob Summers came into the bank to find out how we'd feel about his buying himself one of these new farm-lighting outfits. Seems an agent has been after Bob pretty hard, but because we've got quite a bit of Bob's paper in the bank, he is smart enough to ask our advice before signing any orders.

“Well, Charley Howe and I went into the proposition with Bob pretty thoroughly. It's a good thing, all right, and Bob can get his money back and a good profit out of it if the machine is what the agent claims it is. And that's just the rub—none of us knows enough about this kind of machinery to be a fair judge. The agent may be honest or he mayn't; the machine may be good or it may be bad. We've all been stuck by these slick agents so often that we're a bit shy. So I says to Bob, ‘You go over and talk to Jim Lowden and if

he says it's all right then we'll let you have the money for it.’

“Then I got to thinking about it and I says to myself, ‘Shucks! that ain't a fair deal to Jim. If this farm outfit is any good, Jim ought to sell 'em himself—he ought to get the profit instead of this other fellow.’ So that's what I came to see you about.”

Lowden considered the matter for several minutes.

“In a way you're right, Uncle Jerry,” he said finally. “I ought to be able to sell those outfits and take down the profit, but I can't see my way clear to it, the way things are fixed right now. Later, of course, I'll do it. But the sale of those outfits is a specialty business. A man has to spend a lot of time at it to do it right. Either I would have to neglect my regular business to work on that line, or I'd have to hire someone to work the county for me, or else I'd just dribble along selling one now and then off the floor. I'm not a believer in dribbling. If I go into a thing I go into it right. I don't see—”

“Jim,” broke in the old man, “the thing's as clear as Ward's pond. Lookee here: You know that folks for miles around consider you as a sort of know-it-all on electrical things. If you tell Bob Summers that this machine he's talking about is a good thing, he'll buy it, and if you tell him it's no good, he won't. Why can't we capitalize that reputation?”

Jim pondered.

“I don't see,” he began, but just then the door opened and Bob Summers himself walked into the store.

After a lot of talk between Lowden and the young farmer from Allenburg, the machine under consideration was analyzed, and its merits and possible faults were studied pro and con. In the end, Jim advised Summers to invest, and the latter was about to leave when a new thought struck Lowden.

“By the way, Summers,” he said, “what about the wiring of your building? Is the agent of this outfit going to do that? Seems to me a rather bad deal to have this fellow butt in and not only sell you a plant but take wiring business away from me as well.”

“Why, no,” replied the farmer; “that don't seem hardly fair, does it? As a matter of fact, he told me I could do the wiring myself—buy the stuff off of the mail-order house

and rig it up somehow. Said it wasn't such a hard job."

"Sure, you *could* do it—also your wife *could* buy a spinning wheel and make cloth for your clothes. Such a thing is possible. But I think you better have this job done right. The plant won't be satisfactory unless the rest of the installation is O.K. and any makeshift, mail-order job of wiring you do yourself is not going to give you the service you expect out of the investment."

"That's right, Lowden—that's absolutely right. I'm no expert in electrical things, if I was I wouldn't have come to you for advice about the plant. How much would it cost me to get this wiring done the way it ought to be?"

"I'll have to run out and look over your place before I answer that. Suppose I come out Saturday?"

"Come out about dinner time, the wife will be glad to have you set in with us. Much obliged for giving me the right dope on this here machine. So long!" And Summers started back to the bank.

#### "TELL 'EM YOU'RE THE ELECTRICAL AUTHORITY IN THIS TOWN"

Uncle Jerry Stackhouse had been standing within earshot and had heard the whole conversation.

"Jimmy," he exclaimed, when Summers had gone, "I've got the idea. You get a-hold of that agent, and every other agent of these here farm-lighting outfits in the county, and you say to them this: 'I want you fellows to turn all this wiring work over to the Lowden Electric Company. I'll install the right stuff at the right price, and I'll make it my business to see that these plants are kept in good running order, and that the folks who buy them are supplied with all the electric appliances and dingbats that they can use. I'll boost your game when these farmers come to me for advice, and I want you to boost my game every chance you get. If you agents put these plants in with a lot of mail-order and home-made wiring, they're going to be unsatisfactory. And if you put 'em in that way, when a farmer comes to me and asks me to send a man out to make some repairs or help him out of a hole, I'll refuse to do it. That means that the whole farm-lighting proposition will get a black eye.'

"You tell these fellows, Jimmy, that you're the electrical authority in this community, that you're the

boy who knows, that you're a sort of consulting engineer and that the bank won't lend money to the farmers to buy these plants unless you O.K. the plants. The fellow who refuses to work with you is going to have a mighty hard time selling plants around here—I can see that fact sticking up pretty plain."

"But, Uncle Jerry, what about my going into the farm-lighting business myself? As soon as I can get squared around here so I can swing the proposition, I intend to get the agency of the best plant available and go out after this business."

"That's all right," replied the old man, "and if you had the money right now, I'd probably advise you to do it. But you haven't got it, so do the next best thing."

"Just look at the proposition from this angle: Suppose you had an agency and a good man with a flivver, selling these plants around the county for you; you'd make a few hundred dollars a year net profit out of it all right. But suppose instead of going into the business yourself, you find three or four or half a dozen good men, and induce each of them to take the agency of an outfit that is O. K. and that you can conscientiously recommend, and suppose you let these fellows make their profits on the machine while you do all the wiring and sell all the appliances and do all the service work—what then? Why, you'll make *more* money. These six agents will really be unpaid salesmen for you. Every time they sell a machine, they sell a job of wiring and a flivver-load of appliances."

"But, remember this, Jimmy: You are the man in the middle. You are the electrical authority in this community. The manufacturer who wants to put an agent in this county will see that it's to his advantage to have your co-operation, because without that co-operation he must organize a wiring gang and a service station, or else take a desperate chance upon the kind of mail-order wiring and trust-to-luck service that Bob Summers spoke of. Every intelligent manufacturer in the country will want to persuade you that his machine is equal to the best—you're the local judge and jury when it comes to electrical stuff."

"That advice doesn't square up with the advice Billy Goodenough, the jobber's salesman, gave me last week. Billy advised me to get into the game myself and sell lighting sets," objected Lowden.

"Billy wants an agent for the machine he's jobbing," replied the old man, "and if you're smart you will help him find one. There are two or three pretty good boys in this town that I've been keeping an eye on for a long time. One of 'em might be induced to take that agency, co-operating with you the way I've explained, and I'll help finance the deal. You pick out a good machine—don't just take Billy Goodenough's word for it, but go to the bottom of the proposition and be sure that the machine is *right*. I won't risk my money on a lame horse, and I depend on you for the right information on electrical things. You find the machine, and I'll find the man and the money. We'll start something in this county that'll make the Great White Way in New York look like a shadow."

#### "WILL YOU FIGHT OR CO-OPERATE?"

Billy Goodenough, the jobber's salesman, and one of the new men traveling the same territory for a competitor, were riding together to Robbinstown.

"We've just taken on a farm-lighting proposition," said the new man, "and I'd like mighty well to find a good, live dealer or two in this neck of the woods."

"See Jim Lowden," advised Billy.

"Why, I understood that the Lowden Electric Company won't handle lighting sets."

"They won't," replied Billy; "but Jim Lowden will help you find a man who will—that is, if your machine is A1. No use of bothering with him unless you can deliver the goods. You see, Jim is a sort of electrical czar around here. He's built up a reputation for knowing his business, and no farmer will buy a lighting outfit without asking Jim's advice. If a fly-by-night agent comes into the territory and tries to peddle a poor machine, Jim gently steps on him by advising the farmer not to buy. If a reputable dealer or agent takes on a good machine, Jim indorses it. He's satisfied to get the bulk of the wiring and appliance business that results from the sale of good farm-lighting equipment, without trying to hog it all by selling machines himself. Every machine sold means a job of wiring and a bunch of appliance sales for Jim. Pretty smooth, I call it. So you better see him first."

"You mean to say that I can't sell my machine around here without



consulting this Lowden?" asked the other man hotly.

"Not at all. This is a free country, and all that sort of thing. But you'll find that in any rural community where the local electrical man has real standing, he's the electrical au-

thority for that district. What he says goes. He can help you a lot or he can make it hard for you.

"Now, Jim Lowden is a contractor and dealer—he does wiring and sells appliances. If you come in here and try to hurt his business, he's only

human and he can be depended upon to hit back. But if you come in and offer to co-operate, he'll work his head off for you. Which is the more sensible thing to do—fight or co-operate?"

"I guess I'll see Lowden."

## Entertaining a Thousand Farmers in a New Farm Plant Store

How Four Brothers Fired with the New Merchandising Spirit in the Farm Plant Business Gained 250 Live Prospects in an Up-to-the-Minute "Grand Opening"

**E**VIDENCE that progressive electrical merchants all over the United States are awake to the endless possibilities of the farm electrical trade grows more convincing every day. The Dye Electric Company at Galion, Ohio, in the methods it is using in marketing the electric light and power plants and 32-volt electrical labor-saving domestic appliances, gives evidence of this progressive merchandising spirit.

The company is located in a town of 10,000 in a rich and progressive agricultural territory. For several years this firm, which is composed of four brothers, has been developing an electrical contracting business and selling all kinds of electrical supplies and appliances to the people of Galion and surrounding towns. About six years ago J. V. Dye, the president and general manager of this company, had his attention attracted to the farm electric light and power plant. He assisted in the installation of a large number of these plants in central Ohio, then took the agency for Galion and surrounding territory. These plants proved reliable and his business has continued to grow.

After recently gaining more territory under its agency arrangements, the company took steps to interest the entire surrounding farming community in light plants and in 32-volt electrical apparatus, such as water pumps, power motors, cream separators, vacuum cleaners, fans, irons, etc.

First, Mr. Dye visited a number of plant owners in his community



Two demonstrating outfits are used by salesmen of the Dye Electric Company, Galion, Ohio, to take the light and power plant to the farmers' homes so as to show just what the plant looks like and how it will operate. The demonstrator on the right has, in addition to the plant, a small pump and a panel of lights, both operating off the plant.

who had had their plants from two and one-half to four years. These owners gladly gave him testimonials, and pictures were taken of their installations and of their homes. Mr. Dye made use of these data in a large advertisement published locally, advising the community that the Dye Electric Company would have an opening on Saturday, March 29, to which everybody interested in electricity for the farm was invited.

To back up this advertising, special invitations were prepared and sent to several hundred farmers within a radius of 20 miles, extending to them, their families, their neighbors and friends, a cordial

invitation to this opening and announcing that souvenirs would be given everyone who came. Mr. Dye took pains also to invite personally all the owners of his plant in his territory to attend this opening.

Special notices appeared in the local daily papers. One of the two windows in the new store of the company was decorated with posters and advertisements about the plant and what it would do. In the center of the window was shown a plant itself, and grouped around the base of it the only three moving parts there are in the plant which the company sells.

In the other window were shown

electrical fixtures, lamps, stoves, irons, percolators, chafing dishes and other appliances.

The store inside was decorated in simple but attractive fashion. Various types of fixtures were mounted along each side of the long showroom; and in one group together a complete set of fixtures was mounted, and used in connection with the demonstration of the plant throughout the day. This set of fixtures included all that are needed in a farm home of nine rooms.

At the left of the showroom in front was a counter presided over by two young ladies, who greeted the visitors, took their names and addresses, gave flowers as souvenirs to the ladies, another souvenir to the men and still a third one to the children, and saw to it that each family was given printed matter about the plant.

Along the other side of the room were arranged washing machines, power motors, water pumps, and other electrical apparatus—all connected up and operated by the plant.

Sixteen men and women, all of whom had met the night before and had been given special instructions on how to take care of the crowd



F. A. Crawford, a Lalley Light salesman of Seattle, Wash., has arranged his demonstrating outfit so that he can operate a pump and a fan, and can demonstrate a panel of twenty twenty-watt lights installed in the rear compartment of his outfit. He can also string lamps in the home of any prospect he visits and light them from the plant in his car.

the next day, waited on the visitors, saw to it that the name and address of everyone was secured in a permanent record, that all visitors had the merits of the farm plant ex-

plained to them, and that all received information about the electrical labor-saving appliances which were on display.

It was estimated that nearly 1000 people visited this store during the day and evening, and that at least 250 live prospects went away favorably impressed with the electric plant and the electrical labor-saving appliances.

Following this opening, Mr. Dye called his salesmen together and outlined an aggressive sales campaign. He was assisted in this by executives from the factory whose agency he holds.

Aggressive merchandising methods of this type naturally cannot fail of good results, and electrical merchants everywhere who are entering the farm-lighting business and who, with the assistance of aggressive factory sales organizations, have worked out a definite plan for marketing the lighting plants and the many accessories that go with them, are convinced that the profits in this business are larger in proportion to the investment made and the turn-over than they have been in the city and town electrical trade.

## Where Electricity Can Be Used on the Farm

**F**ARMERS are constantly hearing of the advantages of electricity on the farm, what it will do for them and its wide application. Some of this has been rather vague and The Society for Electrical Development has prepared a list of some 109 applications appended here. Of course, every farm will not find it economical to install all the equipment listed, but every

farm will find profitable use for some of it. Some of the applications can be handled best by a community of interests, for instance, electric threshing and harvesting machinery; hulling machinery, oil concentrating plants; hay balers, etc. High priced machinery used only for short periods during the year is applicable to this community treatment.

Oat crusher  
Alfalfa mills  
Horse groomers  
Horse clippers  
Hay cutters  
Clover cutters  
Corn shellers  
Ensilage cutters  
Corn crackers  
Branding irons  
Currying machines  
Feed grinders  
Flailing machines  
Livestock food warmers  
Sheep shears  
Threshers  
Grain graders  
Root cutters  
Bone grinders  
Hay hoists  
Clover hullers  
Rice threshers  
Pea and bean hullers  
Gas-electric harvesters  
Hay balers  
Portable motors for running threshers  
Fanning mills

Grain elevators  
Huskers and shredders  
Grain drying machines  
Binder motors  
Wheat corn grinders  
Milking machines  
Sterilizing milk  
Refrigeration  
Churns  
Cream separators  
Butter workers  
Butter cutting—printing  
Milk cooling and circulating pumps  
Milk clarifiers  
Cream ripeners  
Milk mixers  
Butter tampers  
Milk shakers  
Curd grinders  
Cassin grinders  
Pasteurizers  
Bottle fillers  
Bottle cleaners  
Concrete mixers  
Cider mills  
Cider presses  
Spraying machines

Wood splitters  
Auto trucks  
Incubators  
Hoovers  
Telephones  
Electric bells  
Ice cutters  
Fire alarms  
Electric vehicles  
Electro cultures  
Water supply  
Pumping  
Water sterilizers  
Fruit presses  
Blasting magnetos  
Lighting  
Interior telephones  
Vulcanizers  
Pocket flashlights  
Ice breakers  
Grindstones  
Emery wheels  
Wood saws  
Forge blowers  
Drop hammers  
Soldering irons  
Glue pots  
Cord wood saws

Egg testers  
Burglar alarms  
Bell-ringing transformers  
Devices for killing insects  
Machine tools  
Molasses heaters  
Vacuum cleaners  
Portable lamps to attract insects  
Toasters  
Hot plates  
Grills  
Percolators  
Irons  
Ranges  
Toilette articles  
Water heaters  
Fans  
Egg boilers  
Heating pads  
Dish washers  
Washing machines  
Curling irons  
Electric ranges  
Floor cleaning machinery  
Ice cream freezers  
Thermostat furnace control



# "Electrify Your Home"

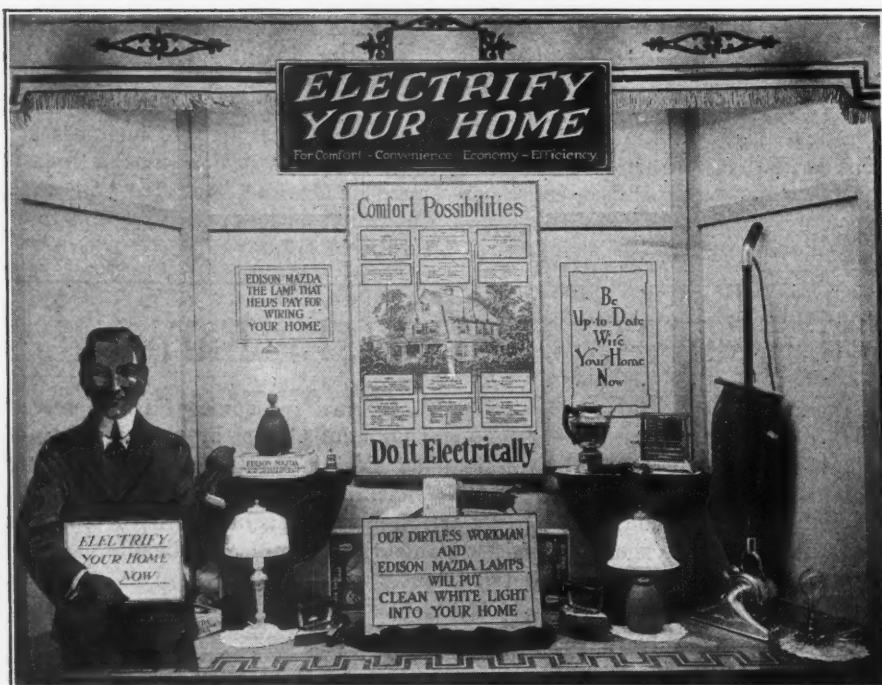
The Society for Electrical Development Inaugurates Its First  
Post-War Campaign for the Wiring of Old Houses—  
April 1 to May 15

**I**N THE past two years the electrical industry has carried out two successful house-wiring campaigns. In view of the fact that both of them, "Wire Your Home Month," 1916, and "Wire Your Home Time," 1917, were conceived and executed during the European holocaust, the results were particularly praiseworthy. More than 20,000 old homes alone were wired in less

which in ordinary times averages about 350,000 yearly, was negligible. Now that the war restrictions are off, estimates of new houses vary all the way from 350,000 to 1,000,000. Representatives of the lamp companies have stated to the Society for Electrical Development that fully 700,000 new houses would be constructed during the next twelve months. The government, more op-

working with the contractors of that city, on April 1 began to wire up all existing houses on its mains. Cleveland, Ohio, is another city where a perpetual co-operative campaign is being waged, between the Cleveland Electric Illuminating Company and the contractors. Schenectady, N. Y., and Scranton, Pa., plan active drives. Albany, N. Y., Plainfield, N. J., Jersey City, N. J., Pittsburgh, Pa., Montreal, Canada, several Connecticut cities, Moline and Elgin, Ill., and other cities are busy.

The society has prepared a complete "House Wiring Portfolio" which is sent to interested companies. This describes the seven basic house-wiring plans, the flat-rate plan, the kitchen-service plan, the wiring-by-schedule plan, the bank-financing plan, the rental plan, the dollar-per-outlet plan and the commission plan. It explains the fundamentals of a campaign, such as prospect list, advertising, personal selling, educational work, estimating, co-operation, follow-up and so on. It shows how to use letters, inclosures, slides, window trims, and provides excellent material for the contractor's use. This is furnished at little or no cost, upon application. The letters, particularly, are out of the ordinary. They consist of two types, one to the business man, in strong colors, and one to the housewife, made up in appealing style, colored and printed. The window display materials are also supplied at small cost by the society.



In this window display prepared by the Edison Lamp Works to tie in with the Electrify-Your-Home campaign of the Society for Electrical Development, emphasis is placed on portable lamps and the better known electrical appliances. The lamps are lighted and put a punch into the words "clean, white light into your home."

than four months of selling. And the impetus this gave the industry has resulted in many thousand additional houses being connected to central station service.

It is estimated to-day that there are somewhere in the neighborhood of 15,000,000 unwired old houses within reaching distance of central station service. During our participation in the war, practically all building operations were curtailed. The construction of new houses,

timistic, claims 1,000,000. No matter how you look at it, the possibilities for contractors, dealers and central stations in the field of new house wiring alone offer great encouragement. And with the co-operative business-getting material now issued by the society there is small excuse for anyone not reaping his share of the harvest.

Many cities are actively campaigning after house-wiring orders. The Brooklyn Edison Company,

## HOW LOUISVILLE WIRED 8300 OLD HOUSES IN TWO YEARS

In two years the Louisville Gas & Electric Company closed 8300 wiring contracts through the solicitation of six men.

The company advertised and solicited but had no part in the wiring contracts secured. It was simply a general agent for the Louisville contractors. The company salesmen bid upon the wiring on an established

price schedule, but the actual business was transacted between the householder and the contractor. The latter accepted the order, did the wiring, attended to their own credits, carried the accounts and made their own collections. The central station rendered no assistance whatever except in the matter of advertising and soliciting.

The city was divided into six districts, each in charge of a competent salesman. The company had accurate records showing approximately 50,000 buildings of all classes, some 24,000, or about one-half, being wired. There were, in April, 1916, about 9000 houses adjacent to the company's lines not connected. Since that time the company has steadily cut down this amount. During the balance of 1916 it is reported they averaged better than one contract per man per day. During the war the company concentrated on the buildings that could be served without the necessity of line extensions, but the newspaper and other advertising exerted a steady influence upon the entire population. Since war ended the company is planning to resume wiring activities on the old basis.

In the initial drive, the advertising sent direct to the 9000 prospects consisted of a series of six two-color mailing cards. The first was mailed toward the end of March, the others following at intervals of two weeks. These cards presented strong arguments to the owners of unwired houses. The company also used the newspaper effectively, reproducing pictures of the satisfied owners and newly-wired houses.

The six best reasons for wiring old houses for electric service, as set forth in the company's announcements were: (1) Money invested in house wiring pays 25 per cent. (2) Wired houses sell for more, because homeseekers want modern conveniences. (3) Electric wiring is "tenant insurance." (4) Electric service is economical. (5) Electric light is convenient. (6) Electric light lessens fire hazard.

These reasons, according to the Louisville company, have proved most effective in the wiring campaigns conducted by it during the past thirty months, when 11,000 old houses have been wired.

The company carried on a slogan contest offering a prize of \$25 for the idea of electric lighting in the home. There were prizes for the

second and next three best slogans and the best short slogan. The company also made good use of testimonial letters.

The Indiana Railway & Light Company, Kokomo, Ind., conducted a house-wiring campaign having two special offers as features.

In the ordinary house-wiring campaign, much of the literature and even many personal calls by salesmen are wasted because of the incomplete records showing unwired houses. To overcome this feature O. M. Booher, new-business manager of the company, had an accurate canvass made of the entire city and an up-to-date list compiled of all wiring prospects. A convenient card file was prepared, which also showed whether a house was occupied by the owner or by a tenant. To keep the list of maximum value, contrac-

outlets, one in each of the four rooms, with drop cords, 40-watt lamps and one wall switch in the living room for a special low price—at that time (1917) \$12.50. The latter offer provides for wiring for six outlets, one in each room, four equipped with drop cords and 40-watt lamps and two with pendant fixtures equipped with white Alba shades and 60-watt lamps controlled by wall

	Based on the 1917 price
Extra outlets .....	\$1.25
Flush wall switches (iron box 30 cents extra) .....	1.00
Three-way switches .....	.65
Porch ball and ring .....	1.50
Flush floor plugs .....	1.25
Wall sockets .....	.65
Wall sockets, flush .....	1.50
One light round pendant, white alba shade, 60-watt Mazda lamps .....	2.75
Two light round fixture, white Alba shade, 60-watt Mazda lamps .....	4.00
Cord drop and socket .....	.75
Meter block .....	.90
City inspection .....	1.00
Other miscellaneous charges .....	



Here is a window which was prepared by the Edison Lamp Works for the new house-wiring campaign. In this display, emphasis is placed on the few tools necessary and the ease with which a home may be wired without dirt and confusion. That is a good idea to play up in your window advertising, or any other form of advertising for that matter.

tors were furnished with blanks, and these were filled out for each residence wired, and returned to the central station so that the corresponding card could be taken out of the "prospect" file and inserted in a similar "customer" file.

The campaign was the fourth to be undertaken by the company; the two special offers were one for a four-room residence and one for a six-room residence. The four-room offer provided for wiring for four

switches for \$22 (1917 price). Other prices were in accordance with the schedule given above.

All work was done by local electrical contractors, four firms having agreed to the prices listed. Customers were required to pay 10 per cent of the contract price when the work was completed and the balance in eleven equal monthly payments. The electric company carried the account, contractors being advanced the full price less 10 per cent.



In connection with the partial-payment plan the Indiana Railways & Light Company adopted the scheme of issuing a pass book, very similar to a bank book, to each customer. This book was brought to the office each month and the payment credited to the customer. By this method every customer had an exact statement of his account and the company never experienced any difficulty through errors or misunderstanding.

Modest newspaper space was used to announce the campaign, April 1, 1917. Main reliance for publicity was placed in post cards, two sets being used, one for tenants and one for house owners. The latter was sent with a self-addressed return card asking a salesman to call with complete information. The former requested the recipient to telephone the company for further particulars. Use was also made of manufacturers' house-wiring literature.

The campaign continued until May 15th and was very successful.

#### HOW CLEVELAND DID IT AND HOW THEY ARE KEEPING AT IT

Cleveland was the first city, so far as is known, to inaugurate the plan of financing wiring contracts through local banks. It had been the custom, in 1916, of the Cleveland Electric Illuminating Company not to finance contracts signed up by the contractors with whom the company co-operated, but to put the question of financing up to the contractors themselves. This tied up too much capital. So the company arranged that when a contract was signed for wiring a house the contractor got his commission as before, but the contract, in addition to the usual matter, contained a brief and simply worded agreement in which the contractor transferred all money due under the terms of the agreement to a local bank, in which the house-owner agrees to make payments at the bank in question. When the work was completed the contractor called at the bank and received 50 per cent of the face value of the contract, in turn giving the bank his six per cent interest bearing note for the full face value of the contract. As the monthly installment payments were made by the house owner the bank credited one-third of each payment to the contractor's checking account and applied the remaining two-thirds to reduce his note.

The plan worked out admirably. The house owner paid for the work in ten monthly installments; the Illuminating Company was relieved of all investment and responsibility; the contractor got necessary working capital to expand his business, permitting him to take advantage of cash discounts and freeing him from the necessity of keeping installment accounts. And it was a good thing for the bank, also, in that it put them in touch with homeowners who might never have been reached in any other way. As the plan worked out, some slight modifications were made, but it is essentially the same to-day as it was in 1916.

In March last the company announced that it was continuing a co-operative house wiring campaign, with many of the contractors, the company using extensive newspaper space for advertisements which are jointly signed by the participants. The company is using 380 in. of space per week. The company pays the major portion of the advertising expense and by placing this advertising with the papers under contract with the company for space, a rate is obtained which is much lower than could be obtained if the contractors were doing it themselves. The company is using a total of about forty papers. It is the intention of the company and contractors to increase the sales effort during the nation-wide "Electrify Your Home" drive.

#### HOW BROOKLYN IS DOING IT

April first the Brooklyn Edison Company resumed its house-wiring campaign along the same general lines which proved so successful in the past, whereby thousands of unwired homes were connected up. The campaign is to run for an indefinite period. Special prices are being quoted, the company aiming to reach the owners of every unwired house along the lines by either of two methods, viz.; by personal solicitation of the salesman or by mail.

The Borough of Brooklyn is divided into seven districts, and in each is a branch office of the company, where among other things is included a display of house-wiring fixtures. The salesman spends part of each day canvassing unwired houses along the lines, and must report at least ten prospects daily. Then the advertising department sends the follow-up mail advertising.

The company also obtains the

names of house owners in any desired location and eliminates those not along its lines. To owners who are not already living in wired houses, house-wiring literature is mailed. Salesmen are notified to whom this matter is sent.

The Brooklyn Edison Company plan is a co-operative one. First the company is benefited by adding to its customers. Second, the contractors in Brooklyn are benefited by getting all the wiring to do at fair profits. And third, the Brooklyn householder is benefited because he is enabled to electrify his home and provide himself with the maximum amount of home comfort on an easy-payment basis.

The prospective customer is sent a booklet through which he may easily compute the exact cost of wiring all or part of his house, and the amount of his monthly installments. This booklet contains illustrations of the fixtures and descriptions and diagrams of the wiring process. A return postcard is included.

#### THE EASY-PAYMENT PLAN

The partial-payment plan of the company provides payments to extend over a period ranging from one to twelve months, depending on the size of the contract, and in installments as low as \$2 per month. The maximum period of monthly payments is as follows: on bills of \$21.45 to \$45, six months; on bills of \$45.01 to \$75, nine months; on bills of \$75.01 and over, twelve months. A 5 per cent discount is allowed if the customer pays cash.

The customer is given his choice of any contractor on the company's list. If he has no preference the company chooses the nearest contractor to do the job.

Special contracts are supplied by the company. One being signed by the contractor, agrees to take the work on the prices specified therein. Another exists in dual form between the customer and the contractor, and between the customer and the Brooklyn Edison Company. The former signifies that the contractor agrees to wire the customer's house as per the specifications and price attached. The second agreement provides for the financing, in which the company agrees to pay the contractor in full upon completion of the work and to receive the amount

(Continued on page 195)

# Eleven Master Arguments

## That Win the Farmer

Light and Safety—Water Supply—Wood Sawing—Milking—Separator and Churn—Corn Shelling—Barn Chores—Clothes Washing—Ironing—Sweeping—Other House Chores

By W. E. BAYARD

ONCE upon a time up in a village in Vermont the squire's trotter got out of the barn and disappeared. They looked all over for her but they couldn't find her. That night the squire tacked up a notice in the general store, offering \$5 reward for her return. Pretty soon a half-witted boy came in and heard the talk about the reward and got excited right away. "All that money," he exclaimed, "for leading a mare back home? I guess I'll find her." And everybody laughed.

After a while there was a shout outside and the "Stove Committee" rushed out and, behold!—the boy had come back with the squire's pet. "How did you find her?" everybody asked.

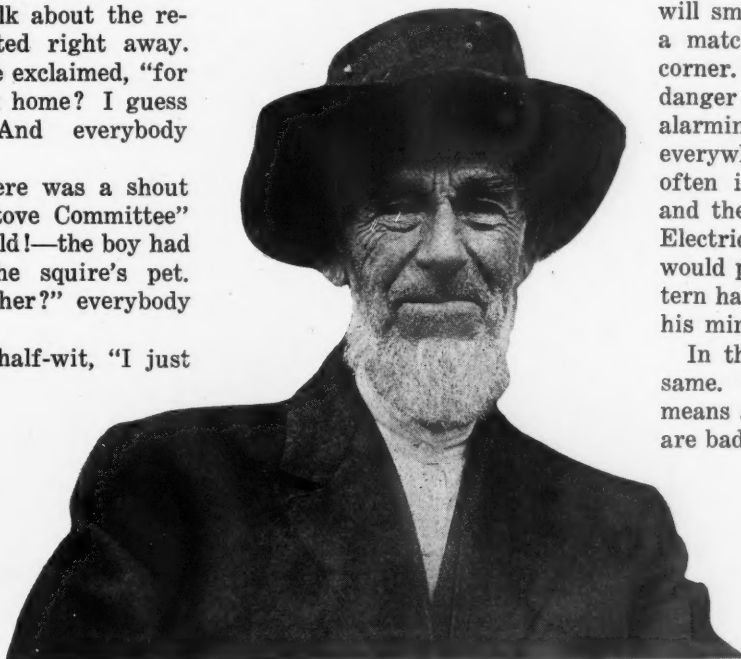
"Wall," said the half-wit, "I just kept sayin' to myself: Where would I go if I wuz a horse? — and I went there and she did, too."

There is a lot of sense to that point of view, and if the electrical man who could be pushing farm plants and is not, would just get that angle on it,

he would soon be on his way toward all the opportunities it offers. What would he want if he were a farmer? Why, electric light and power, of course. And what would his wife want? Why, she would want all the household appliances that a farm plant can operate, and power for a half a dozen chores that plague the life out of her now. And there you have it.

This electrical man is, after all, just an ordinary human being. So is

the farmer. The only reason why he and this farmer do not entirely agree is because they have never talked the matter over. Once they do and the farmer sees the mechanical value of this plant to him and finds how easily its purchase can be financed, he will want to buy. And



You believe you are a salesman. Are you? Can you sell a farm-light and power plant to this man? The American farmer wants value for every dollar that leaves his pocket. He is cool headed, and rapid-fire salesmanship is not likely to run him off his feet. He is slow to make a decision. Yet he *will* buy. Can *you* sell him?

just as soon as the electrical man finds out how hard the farmer of today is up against it for electric power and light, he will be able to appreciate the pressing need and sell the farmer just that much more easily.

Well, what are the reasons why the farmer should have an electric plant? What are the things that the electrical man should know in order to make the farmer see it clear? What are the conditions and the ar-

guments, in other words? Let's list them down and make it simple.

### 1. THE ELECTRIC LIGHT ARGUMENT

In the first place the farmer needs electric light for safety. Year after year, he lives in dread of fire in the barn and in the house. He is always on the watch for fear the hired man will smoke around the hay or throw a match or cigarette butt in some corner. That's bad enough. But the danger from the lanterns is far more alarming. For the lantern must go everywhere, and about every so often it is kicked over or dropped and there's a chance to start a fire. Electric light throughout the barns would put a welcome end to the lantern hazard and take a great load off his mind.

In the house, the situation is the same. A bad fire in the country means a burned-up house, and lamps are bad things to have around. They fall. They creep up and get to blazing. They explode. The farmer and his wife are watching them perpetually lest a servant or a child be careless and make trouble.

At the same time, of course, the care of lamps is a great burden. On the farm where they have always used lamps, they are accustomed to it and don't think much about it; yet, it means fully an hour of dirty work each day. For the lamps must be cleaned and trimmed and filled with care if smoke, odor and feeble light is to be avoided. This job falls upon the farmer's wife or daughter. But electricity offers a better light and an immediate reduction in the fire insurance rate. The benefits of electric light, therefore, make a powerful appeal.



## 2. THE WATER SUPPLY ARGUMENT

Next to electric light and its safety value comes the great promise of freedom from water troubles, that the electric plant offers to every farm. For water is a source of never ending irritation and hard work, out in the country. Neither wind mills nor hydraulic rams nor gas engines are satisfactory. They are always failing at the wrong time. They need a lot of care and tinkering. They never satisfy. With an electric motor, however, the pumping may be made entirely automatic with a float control in the tank, so that a full supply is always ready, always waiting. And consider what this means on the farm.

Without running water in the barn the cows and horses must be driven to the spring or brook twice daily. It may be at some distance from the barn. It probably will kill an hour each time, two hours of high-priced labor that the lack of water costs—sixty hours a month. How many full days' time does that make in a year? What does it cost?

In the house, also, a good water supply is a Godsend. It takes care of the sewage problem, always troublesome on the farm. It provides the luxury of a bathroom. Saves time in the kitchen and the milk house, and puts an end to pumping for all time. These are big issues to the farmer's wife and to the farmer too. Water is one of the most important things that the electric plant brings.

## 3. THE WOOD-SAWING ARGUMENT

On every farm there is lots of wood to saw. But labor nowadays objects to cutting wood and is so scarce that it is hard to get the time for it. The logs are brought in from the wood lot through the winter in spare time, and all the year it must be sawed up for the kitchen stove and through the cold months for the other stoves and fireplaces. It makes no end of trouble.

On some farms this means a full day sawing wood each week, and a full day's time at present wages makes the wood a whole lot too expensive to be pleasant. But there is another side to it that is a big one to the farmers. Because farm labor is so hard to get and keep, there rarely will be enough hands at work, and so many other fill-in jobs demand their time that the wood is side-stepped and the women must

be forever after someone to cut wood. With a motor and a buzz-saw, however, all the sawing would be done when the logs are brought in, and that trouble would be over with a saving of almost the entire cost.

## 4. THE MILKING ARGUMENT

On the farm where there are a number of cows it is a discouraging struggle to get them milked. The men don't want to do it. It's hard work. With electric power a milking machine can be used and the problem is solved, for the milking can be done in shorter time and the cows will be properly stripped and won't fall off in yield.

## 5. THE SEPARATOR AND CHURN ARGUMENT

There are many farmers with plenty of land for cows and hogs, who don't dare go ahead and put in the stock because they can't get the cows milked in the first place, and because if they could they would be unable to handle the milk. Electric power smooths out these difficulties also. The motor that drives the milking machine will take care of that part of it. Another motor will operate the separator and the churn and assume this burden that has broken down so many farmers' wives.

With a motor for the separator all the milk he can produce can be taken care of, and the cream can be shipped and the skim milk fed to fattening hogs. The churn will no longer be a source of friction for the hired girl or sap the health of the farmer's wife or daughter. All the butter needed can be made, and butter can be sold if profitable, and an hour's weary turning of the crank can be saved each time.

## 6. THE CORN-SHELLING ARGUMENT

The women feed the poultry on the farm and usually the corn is shelled each day as they feed it. It is a mean, back-breaking job. But with a motor to drive the sheller, a week's supply of corn could be shelled at once in much less time and with infinitely more convenience.

In the same way, when the corn is taken to the mill, from time to time, to grind up meal for the house, it means a big job of shelling first. Usually, the corn is carried to the mill on the cob and shelled there at extra cost. With a motor on the farm this part could all be done at home and save the cost of shelling at the mill.

## 7. THE OTHER BARN CHORES ARGUMENT

Then there are lots of other farm chores, not every day or every week jobs, but work that is spread around the calendar and takes a lot of time that costs a lot of good, hard coin. Electric power will save the most of it and bring a lot of added comfort and the time to do a lot of other work that has to be neglected under present-day conditions on the powerless farm.

These are all jobs done by the turning of some crank—cutting ensilage, chopping feed, sharpening mower blades, corn knives, axes and scythes, running the machine shop. If they can be easily done at home it saves innumerable trips to town for this and that, and the wasting of hours that should be spent in work out in the fields.

## 8. THE CLOTHES-WASHING ARGUMENT

On many farms they now have to send the washing out, because the cook won't do it any more. The family can't and hasn't time to, anyway, with all the other duties they must take over because their place is short-handed. Every week, therefore, somebody has to hitch up a horse or take the flivver and drive several miles, perhaps to town, to carry the wash and bring it back. The sheets and spreads may have to go to the steam laundry. All that wastes time. All that costs money. How much more profitable it is to use an electric washing machine and have it over in an hour on Monday morning.

Every inducement of this kind that applies to the ordinary town home is even more appealing on the farm. Housekeeping is harder in the country than in town.

## 9. THE IRONING-MACHINE ARGUMENT

The electric ironing machine is just as valuable to the farmer's wife as elsewhere. If the wash is sent out, the present cost of it can be saved this way. If the ironing is done at home, here is a way to save from one to two solid days of hard work at the ironing board, by making it an easy job that can be finished without weariness in a short afternoon.

The time it frees can be used in other more productive work, or

gratefully reclaimed for rest and recreation.

#### 10. THE ELECTRIC SUCTION SWEEPER

Sweeping and cleaning is another kindred problem in the farm home, for the servant in the kitchen won't do it—and there may not be a servant in the kitchen. The women of the family have to wield the broom, and it is just as hard on them as on their sisters in the city; harder, for they have more other hard work to do.

The farmer's wife is eager for the electric cleaner.

#### 11. THE OTHER HOUSE-CHORES ARGUMENT

Other house chores there are, too, that electricity can help with, just as there are chores out in the barns. In the winter hogs are killed and meat must be ground up for sausage, scrapple, liver pudding and the rest. Hook a motor to the grinders and the job is done in far less time with far less work. And the same motor will turn the bread mixer, run the ice cream freezer, sharpen knives, polish the silver and do all other work where there's a crank to turn.

An electric fan will not only bring its comfort in hot weather, but will help bring the fire up quickly, either in range or furnace. And all the little comfort appliances that are adapted for low-voltage circuits, are at once available to make life easier and healthier and happier in the farm home.

These are eleven great arguments that win the farmer. Understand

them. Learn to talk them. Drive them in whenever you are talking to a farmer and you will sell farm lighting plants. With these points clear in the farmer's mind, there is but one more obstacle to overcome—the problem of financing, and that is

hardly any obstacle at all to-day. For, the farmer has money. The farmer has bright prospects. And the local bank stands ready now to put up the money to buy the plant for any farmer in the land that you would try to sell.

## 205 Electric Ranges in Wardman Park Inn, Washington, D. C.

BY G. P. MANGAN

District Manager, Potomac Electric Power Company

ON THE CREST of a hill, overlooking beautiful Rock Creek Valley and a large part of fashionable Washington, D. C., stands Wardman Park Inn, a building of unusual design, in which everything possible has been done to provide for the comfort of the occupants. Needless to say, there are many ways in which electricity is used to advantage in this unique building.

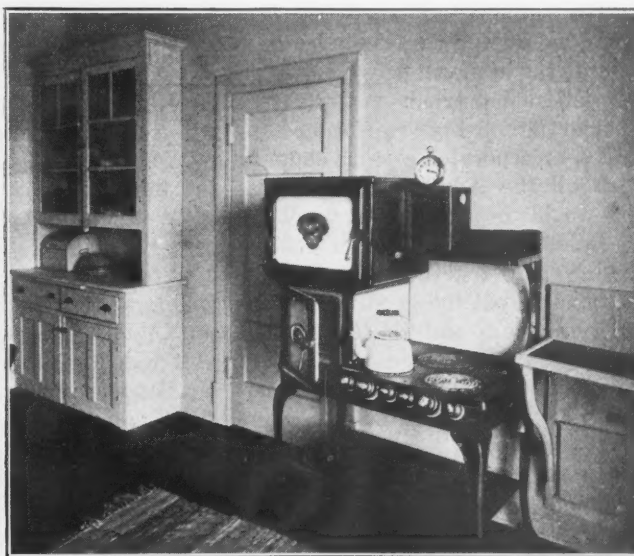
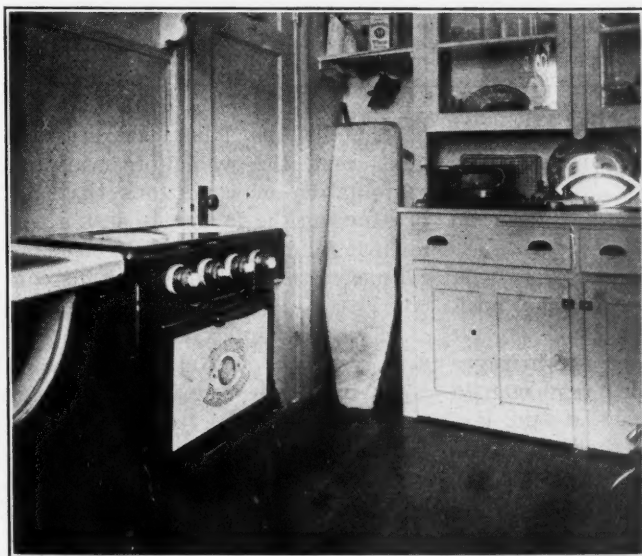
Of course, all lighting is electrical and there are eight electric elevators, an electric refrigeration plant, and also numerous electrical devices in the kitchen connected with the public dining room. The building contains 862 rooms, 577 baths and 374 kitchens, exclusive of service and servants' rooms in the basement. By an ingenious arrangement rooms can be combined to make apartments of almost any size.

One of the outstanding features of Wardman Park Inn is the electrical cooking equipment in the apart-

ments. Mr. Wardman has had installed thirty automatic electric ranges, each of which has three hot plates and two ovens, one for baking, roasting and broiling and the other for vegetable cooking. There are also installed 175 smaller electric ranges each being equipped with two hot plates and an oven for baking, roasting and broiling. All of these ranges were purchased from the Potomac Electric Power Company. This company also supplies all the electricity required in the building.

All of the electric ranges in Wardman Park Inn are individually demonstrated to the tenants by experts from the factories. The Potomac Electric Power Company's appliance service department is looking after the adjustment and maintenance of the ranges.

The tenants in Wardman Park Inn pay a stipulated amount for rent which includes electricity for both lighting and cooking.



The Wardman Park Inn, Washington, D. C., is equipped with thirty automatic electric ranges, and 175 smaller electric ranges each with two hot plates and an oven for baking, broiling and roasting



# Sanders Sets a Farmer to Catch Farms

Farmer Greenway, Farmer Harrison, Two Banks, and the Electrical "Live Wire" of Middleboro Put Through a Profit-Making Farm-Plant Campaign

By EARL E. WHITEHORNE

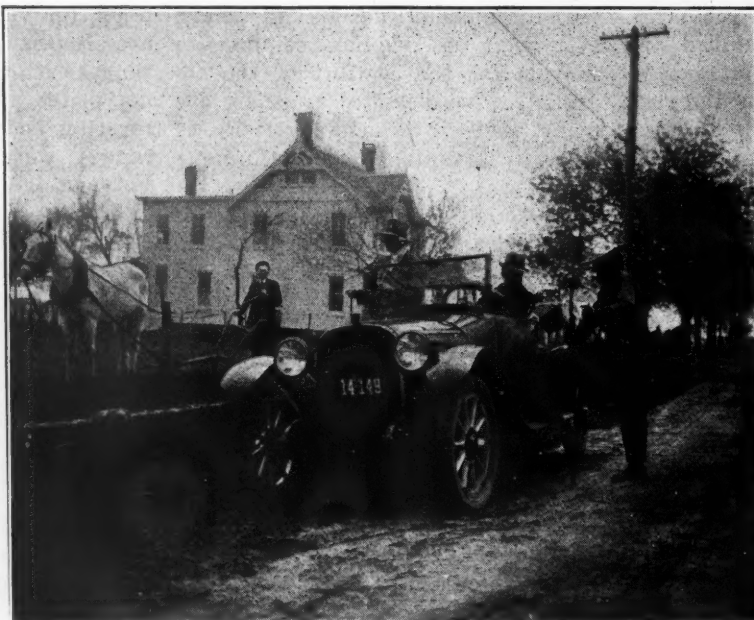
I HAD to go out to Chicago last month, and I stopped off at Buffalo and the combination didn't work. As a result I have had another chance to drop in on Sanders, my friend the contractor and electrical merchant out in Middleboro, Ohio. I wanted to be in the "Windy City" on Monday. I wanted a day in Buffalo. I couldn't finish my Buffalo business in time for the early evening train on Friday. That killed the half day Saturday as far as Chicago was concerned. So I phoned to Sanders at his house and he said "Come a-runnin'." I went out early in the morning—it's not far—and stayed with him till Sunday noon.

I hadn't expected to fall into another story. The last I had seen J. P. was at the meeting in Adamsburg, when Sanders and the G. M. of the local central station had tried to put over their big idea for a co-operative, incorporated electric shop, in which all the Adamsburg electrical men would be stockholders. They had failed because the other fellows wouldn't play together, but the opportunity looked too good to pass by and so Sanders and the G. M. had decided to go it alone. This plan I knew was simmering for the moment. In the meantime the ever-busy Sanders had been up to something new again.

I found J. P. in his office, in the rear of his store, and right away he started to kid me. "Who the devil told you there was a new story out

here?" was the way he greeted me with his regular Sanders grin.

"Not a soul," said I. "You wrong me. I am an innocent wayfarer who has lost his train, that's all; but if you know anything you will have to



And from then on Harrison keeps dropping in and talking, one time to the farmer and another to the wife, until he lands them. He tries to be at leisure to spend the day, if necessary, working and talking and winning confidence and building up enthusiasm. And it has proved to be the right idea.

tell it before I leave. 'Eventually—why not now?'—in the language of the flowers."

"Well, haven't I always been an easy victim?"

"You sure have, and it has won you fame and fortune. Come, open up. What is it now?"

It was farm-lighting and in regular Sanders style. He first began to think about the farmer he said, last spring when he read the first farm-light and power issue of ELECTRICAL MERCHANDISING. The figures jolted him.

He had never dreamed that there were actually 6,600,000 farms

in the U. S. A. averaging 135 acres each; with 150,000 other prospects among the country stores, clubs, hotels and hamlets, and only some 200,000 electric plants installed among them so far. There was the waiting field, with Middleboro located in a very prosperous section of Ohio's best farming territory.

"The prosperity of the farmer is beyond question," said Sanders. "His ability and willingness to buy machinery to save labor have been already demonstrated in his fields, where he is adapting tractors in addition to the big variety of cultivating and harvesting machines. His desire for the farm electric plant is witnessed by the fact that there are already nearly 100 manufacturers of these farm outfits, with one manufacturer alone turning out almost 1000 a week. On top

of that is the labor scarcity, the labor cost, the whole big war-time combination of conditions that put pressure on the farmer to seek a permanent relief through some mechanical means that will be under his control.

"The idea appealed to me" Sanders went on, "and I thought a lot about it. There were just two things that bothered me. I didn't see how I would get time to canvass the farms around here; yet, unhurried personal calls would be necessary. Also, I realized that I didn't know enough about the farm. I didn't think

the way the farmer does, and I knew that would hamper me, and that I'd waste a lot of time learning how. It bothered me. I didn't like to go to the hardware people who sell the farm machinery. I wasn't ready to write to the farm plant manufacturers. Finally the thought struck me that the way to find out how to sell the Middleboro farmer was to ask the Middleboro farmer how he wanted to be sold. And that's just what I did."

#### ASKING A FARMER HOW HE WOULD SELL

Well, Sanders inquired around and found out who was generally considered the most progressive farmer around Middleboro. He called up this man, Farmer Greenway, one Saturday morning and asked him if he couldn't come out and talk to him that evening or next day. He didn't explain except to tell him that he knew nothing about the farm and wanted to get a little advice on a farm subject. This started the farmer's curiosity working. He said to come over in the morning.

Sanders turned up in the morning in his car. He took along the Sunday papers and some good cigars. He told the farmer that he was a business man in the electrical game and thought he saw an opportunity in the farm-lighting field and didn't know how to go about it. Sanders showed him the figures—what the opportunity was. He said: "What would you do if you were me? How would you undertake to sell farmers around here?"

This put it in an interesting light, and the farmer argued it over with him all the morning. Most of the fertilizer, he said, was sold by a few of the farmers or their sons, who were agents and went about during the winter and got orders from their neighbors. They had experience and could talk facts, he said. The farm machinery was sold by men who came around and by the hardware merchants in town; but it was the men who came out to the farm who converted the farmer to this or that new type of mower or binder and got him started. To sell electric plants, he thought, some men who knew farming ought to go to each farm and look around and point out right there just what conveniences and economies electric power would bring to that particular farmer and his wife. And there ought to be one

working somewhere so that the prospect could go and see it.

Then Sanders sprang his questions—and the plot began to thicken.

"Could you suggest some farmer around here," he asked, "who might be a good man to do this selling? He could be a retired farmer, or some farmer's son, who wants to get a change and a chance to make more ready money."

"Well, perhaps," said Greenway.

"Would you consider my installing an electric plant here on your farm, to light your house and barns, and give you power on a sort of a partnership arrangement? I would make the installation at my expense, and would be free to bring other farmers here to see it work. At the end of a year you can pay me for the plant, but in the meantime I will credit you with a liberal commission on all the sales I make, which will pay part of the cost of your outfit."

The farmer said he would think it all over and Sanders came away. It was a good start.

#### BOTH BANKS AGREED TO HELP

Then he went to two of the Middleboro banks and laid the proposition before them; got them interested and secured their co-operation. His bank agreed to lend him the cost of this first installation, secured by his note and the farmer's agreement to pay for the plant in a year or give it up. Both banks agreed to send out letters to all their farmer depositors, advising them that in order to co-operate with them in the equipment of the farm to meet the new conditions of labor and expense, they would be glad to finance the purchase of farm electric plants to enable them to be secured by the farmer on an easy-payment basis.

This meant that Sanders could make his initial installation at no more cost than the interest on the loan, *provided* that it did not come out at the end of the year, which was, of course, a very good gamble. It also meant that he could offer the farmer prospect an appealing divided payment price and yet not tie up money in the deal, for the bank would advance the cash and the customer would pay the interest. With this further inducement hanging to his belt, he went back again to Farmer Greenway, and they talked some more. The upshot was that they made their deal and Greenway undertook to find a man to be the outside salesman.

"We had a time finding the man," said Sanders. "We didn't want the farm machinery people gossiping about our scheme before it was ready, so we worked rather carefully. Greenway scouted around the outskirts. I snooped about in town. Finally we ran across a farmer who wasn't happy on the farm. His wife had died. He had been unable to get labor. He had a chance to rent his farm and wanted to take his children into town nearer the school and have things a little easier, for a while. He was intelligent and energetic. I hired him on a salary and commission basis."

It was October by this time. Sanders took on the agency for the farm plant that looked best to him and in closing arranged to have his farmer-salesman go to the factory for a two weeks' course of training. He paid the salary and the manufacturer paid the expenses for this period on the theory that they would be willing to send a salesman to Sanders to help him get started, but that this would be less effective. They took the man through the factory processes until he knew the plant and believed in it. They schooled him in the electrical knowledge he needed. They showed him installations at work and they taught him how to sell the plant and he came back to Middleboro loaded for bear.

In the meantime Sanders had been busy. He had taken a short lease on an empty store down near the market where the farmers are sure to come when they are in town, and he equipped it as a farm demonstration. He installed a plant with engine, generator and batteries, where they could be seen and studied. Then he had two rooms built in rough, one to show house lighting and one barn lighting, with a display of the fixtures to be used. In the front he had all the appliances—a wood saw, a corn sheller, a feed chopper, a grindstone, a pump, a separator, a churn, a washing machine, an ironer, a vacuum cleaner and so on. To operate these barn machines he had a motor on a truck that he could pull around and hook up just as the farmer would.

He secured a number of these barn equipments from the hardware dealers or farm machinery agents without investment by exhibiting them with a prominent card stating that they were sold by George Morris or the Central Hardware Com-



pany or whoever it was. The household appliances he took out of his own stock. It made an interesting lot of stuff for the farmer to look at, and not the least interesting item was a folder he had printed describing the scheme of financing and offering the co-operation of either of the two local banks. Every caller took away with him this folder and another special folder Sanders had prepared to tell the story of the farm plant, with a local twist bringing in the name of his farmer salesman who was well known, and inviting the reader to visit the Greenway farm to see a plant at work.

#### CULTIVATING THE FARMER PROSPECT

This demonstration had been in operation for six weeks, when I was there. Harrison, the farmer-salesman, had been on the job for several months, and things are moving. Harrison goes out every morning in a flivver and drops in at some farm. He chins awhile with the farmer and if it works out that way often jumps in and lends a hand with whatever the job happens to be that they are busy with. He'll spend a half day there, maybe, doing anything from mending fences to killing hogs or sawing wood. While he works he talks and tries to make a definite engagement to take the prospect over to Greenway's or to some other later customer who has installed a plant nearer by. A farmer has to plan ahead usually to take a morning or an afternoon off.

Then Harrison goes back on the appointed day and runs the prospect over to the electrified farm and there they look things over and talk and argue. On the way home, if possible, he runs him into town and shows him the demonstration in the store. Often this is not convenient and he tries to fix it for another day. He does not leave it for "the next day you're in town," but sets another day and goes out after the prospect again and this time he invites the farmer's wife to come along also, and usually she does. They spend another afternoon looking at the appliances, discussing them and developing desire. Both the farmer and his wife find these appliances particularly appealing and are eager to see them work and try them with their own hands. They go home with a pretty well formed appetite for an electric plant. And from then

on Harrison keeps dropping in and talking, one time to the farmer and another to the wife, until he lands them.

#### ONE-APPOINTMENT-A-DAY PLAN PROVES EFFECTIVE

He never makes more than one appointment for any one day, however. If there is time when he gets through, he can make other calls but he tries to be at leisure to spend the day if necessary, working and talking and winning confidence and building up enthusiasm. And it has proved the right idea. He has averaged so far a plant sold every two weeks, and with every plant sold, of course, he has found a market for a number of appliances. He has taken on the agency in Sanders' name for a separator, a churn and a feed cutter, and plans to sell other farm appliances. In short, he is trying to turn each customer into a permanent account by selling first the farm plant, then from time to time appliances for the home and for the farm.

In every case, he offers to the farmer-prospect at the outset the opportunity to buy his farm plant with easy payments, financed at the bank, and by permitting his instal-

lation to be used for demonstration, to earn commissions on other sales to help buy electric appliances for his home. Harrison offers one-third of his commission to the customer who will help by talking farm plant to his neighbors and demonstrating his equipment to them. When the installation is made, of course, Sanders does the wiring and the farmer-salesman gets a commission on this also. It's his account. He sees it through and makes the most of it.

It is a new field for Sanders and for most contractors. He has been fortunate in securing the right man but there are also right men near the other cities waiting to be called. "I believe I am going to make a great, big thing of this," Sanders told me. "I am looking to it to become one of the big things in my business. For, more and more farmers will see the need and buy, and every farmer-customer will be good for perpetual business—more appliances, material for maintenance, and so on.

"You see, the farmer has been getting big prices for some time. He is prosperous and he sees big years ahead. The only thing that has worried him has been the matter of labor. Now comes the electric plant to solve this problem for him. It offers every contractor in the country a chance to broaden his business and establish a new source of income that will outrun anything he has got."

"But how are you going to be able to handle this, J. P.?" I asked. "When will you find the time without neglecting your wiring business, or your appliance campaign or the shop?"

"E. W., how does any man run any business that is more than one-man size?" I have got it all in good hands now and organized. Harrison is operating this farm department as though it was his own. Miss Norton is behind the appliance selling. Jennings is practically running the store himself. I have a bang-up foreman on the wiring. I watch 'em all and help 'em all and punch 'em all up when they need it. They share in the profits of their own department and it works. Why not? It works for me. It will work for any other contractor."

And there you are. J. P. has set a farmer to catch farms and there is every prospect of a bumper crop, with plenty of other business on the side.



#### A Hurry-Up Window Display

By FRANK FARRINGTON

WHEN YOU HAVE washed up the window without making advance plans for a new display and find yourself rushed and unable to stop and make up a trim, use the following idea, for which you should have a show card in readiness.

Simply set a step ladder into the window and on the top of it place an electric lamp or any electrical device or object that is large enough to be seen plainly if the ladder top is above people's head. At the foot of the ladder place the card which has on it an arrow pointing upward and the lettering, "At the Top of the Ladder."

This indicates superior quality on the part of whatever is shown and this will be recognized as the point being made. Five minutes will arrange the display and five minutes will take it out when you are ready to go on and really trim up the window.

# Federal Aid for Crippled Soldiers

To Aid America's Disabled Soldiers, Sailors and Marines in Choosing a Vocation the Federal Board for Vocational Education Has Prepared an "Opportunity Monograph" Explaining Electrical Construction, Maintenance, and Repair Occupations

**T**O HELP Uncle Sam "give him back his job," especially if he is a disabled soldier, sailor, or marine, ELECTRICAL MERCHANDISING calls attention to one of the "opportunity monographs" prepared by the Federal Board of Vocational Education, under the title, "Electrical Construction, Maintenance, and Repair Occupations." This monograph deserves a careful reading by all electrical contractors.

The following excerpts from the introduction will indicate the purpose, scope, authors, and contents of the booklet:

As a disabled soldier, sailor or marine you should remember that the office of the Surgeon General, War Department, and all its employees, the Bureau of Medicine and Surgery, Navy Department, and all its employees, and the Federal Board for Vocational Education and all its employees are mutually interested in your welfare solely. They have arranged a definite plan of co-operation to help you in every possible way.

All disabled soldiers, sailors and marines in hospitals who want information about re-education should ask any instructor of the Hospital Educational Service or the representative of the Federal Board for Vocational Education.

Men discharged from the military or naval service who want information should write to or call at the office of the Federal Board for Vocational Education, Washington, D. C., or the district office of the Federal Board of the district in which they are located.

This monograph was prepared by Terrell Croft and L. A. Emerson, under direction of Charles H. Winslow, chief of the Research Division of the Federal Board for Vocational Education. Acknowledgment is due to Dr. John Cummings, of the Research Division, for editorial assistance.

Demand for electrical men is increasing constantly, and a returned soldier, whatever his disabilities and whether or not he has had previous experience, will be able in nearly every case to find some electrical job which will be interesting to him and at which he can make good wages.

To describe occupational possibilities in different lines of electrical work, the Federal Board has issued several monographs, of which this is one. If you desire to follow an electrical vocation, and do not find discussed in this monograph the specific occupation in which you are interested, obtain from a rep-

resentative of the Federal Board one of the other publications dealing with electrical employments.

Electrical construction, repair and maintenance occupations discussed in this bulletin cover the following related activities: Electrical contracting and repairing, plant and factory electrical maintenance, electrical inspection, work in storage battery service stations, electrical automobile work.

*The free electrical training which the Federal Board offers you may afford you the opportunity of your life-*

marines, whether in or out of the hospital, should know the address and keep in touch with the office of the district in which they are located. The district offices of the board are located at the following points:

*District No. 1.*—Maine, New Hampshire, Vermont, Massachusetts and Rhode Island. Office: 433 Tremont Building, Boston, Mass.

*District No. 2.*—Connecticut, New York and New Jersey. Office: 711, 280 Broadway, New York, N. Y.

*District No. 3.*—Pennsylvania and Delaware. Office: 1000 Penn Square Building, Philadelphia, Pa.



Maimed in their bodies for life, but unmaimed in spirit, these heroes of American battlefields in Europe have accepted the homeland's offer to start them right in their changed lives. They are pursuing their studies in one of the electrical courses offered at one of Uncle Sam's vocational schools for disabled soldiers.

*time.*—By availing yourself of the assistance which the board is prepared to render, you can take at some suitable school an electrical course, at government expense. Thereby you may train yourself for work in the future at higher wages than you were earning before enlistment, and perhaps in a pleasanter trade than the one you were following. You should at least be sure that you understand the extent of the provision made for your training in any line you may elect, before you make an ill-advised break for a job. Consider the coming years rather than the immediate present and prepare yourself accordingly. In electrical work particularly, it will pay a man, not only in dollars and cents, but also in future happiness and satisfaction, to have some theoretical knowledge of the work which he is pursuing. This knowledge can, under Federal Board direction, be acquired without cost to the soldier at numerous electrical schools.

All disabled soldiers, sailors and

*District No. 4.*—District of Columbia, Maryland, Virginia and West Virginia. Office: 606 F Street NW., Washington, D. C.

*District No. 5.*—North Carolina, South Carolina, Georgia, Florida and Tennessee. Office: 823 Forsyth Building, Atlanta, Ga.

*District No. 6.*—Alabama, Mississippi and Louisiana. Office: 322 Maison Blanche Annex, New Orleans, La.

*District No. 7.*—Ohio, Indiana and Kentucky. Office: 1212-1214 Mercantile Library Building, Cincinnati, Ohio.

*District No. 8.*—Michigan, Illinois and Wisconsin. Office: 1600 The Westminster, 110 South Dearborn Street, Chicago, Ill.

*District No. 9.*—Iowa, Nebraska, Kansas and Missouri. Office: 517 Chemical Building, St. Louis, Mo.

*District No. 10.*—Minnesota, North Dakota and South Dakota. Office: 742 Metropolitan Bank Building, Minneapolis, Minn.

*District No. 11.*—Wyoming, Colorado, New Mexico and Utah. Office: 909 Seventeenth Street, Denver, Col.

*District No. 12.*—California, Nevada and Arizona. Office: 997 Monadnock Building, San Francisco, Cal.

*District No. 13.*—Montana, Idaho, Oregon and Washington. Office: 539 Central Building, Seattle, Wash.

*District No. 14.*—Arkansas, Oklahoma and Texas. Office: 810 Western Indemnity Building, 1000 Main Street, Dallas, Tex.



# How to Work Out Your Farm Wiring Problems

ELECTRICAL MERCHANDISING is indebted to the Lalley Electro-Lighting Corporation, Detroit, for the valuable data on wiring which appears on this and the following two pages. These data have been taken from the "Lalley Light Service Manual, Number One," which has been prepared for the use of distributors, dealers and service men of the Lalley company. Space does not permit the excerpting of other data in the manual, but those which are here given should be of positive value not only to Lalley men but also to all contractors and dealers who are handling farm light and power plants.—EDITOR.

**E**LECTRICAL men who are face to face with the problem of figuring out the wiring for a farm light and power plant, will find the following data of material assistance. Some of them will be familiar to many electrical contractors and dealers, but for the sake of definition and completeness, data that may seem elementary to some have been included with the more unfamiliar formulas and explanation.

## ELECTRICAL TERMS

**Volt**—The unit of electrical pressure. Same as pounds per square inch pressure in a water tank.

**Ampere**—The rate of flow of the current. Same as number of gallons per minute, flow of water.

**Ampere-Hour**—An expression showing capacity. A battery stores up current, or delivers current the same as a tank holds water or delivers water. The amount of current that is delivered to the battery, or amount taken from the battery—in a given time—is called ampere-hour rate.

**Ampere-hour** is an expression that has the element of time and volume combined.

**Watt**—The electrical unit indicating power. 1 watt = 1/746 hp.

Volts multiplied by ampere = watts. 746 watts = 1 elec.-hp.

Watt divided by volts = amperes. 1000 watts = 1 kilowatt (kw.).

Watts divided by amperes = volts.

## WIRING

It is of the greatest importance that the correct size of wire be used in every circuit.

If the wire is too small the loss of energy in the line (line loss) will be so great that it will prevent the necessary amount of pressure (voltage) from reaching the end of the line. This will cause lamps at the end of the line to burn dimly or the motor at the end of the line will not run at full speed, which means that they are not receiving the full amount of power on account of this line loss.

If the wire is too large, the cost of wiring is greater than it need be. It is, of course, always preferable to use wire slightly larger than is actually necessary rather than to use wire that is too small. Excessively large wire is not required.

There are three things that must be known before the size of the wire can be calculated—

First, the current (ampere) to be carried;

Second, the distance (in feet) from the plant to the place where the current is to be used;

Third, the voltage drop or greatest loss in pressure that can be permitted between the source (plant) and the place where the current is consumed.

## HOW TO DETERMINE THE LOAD IN AMPERES

Lamps are rated according to their current consumption measured in watts.

To obtain the consumption in amperes, it is only necessary to divide wattage of the lamp by the voltage. Because the voltage of lamps used with barn lighting-plants is from 28 to 32 we will consider in all our calculations the average voltage between these two, which is 30. For example, a 20-watt 28-32-volt lamp consumes current at the rate of 20-30 or  $\frac{2}{3}$  amp. per hour.

The total amperage consumed by any number of lamps can easily be obtained by using the above rule or by the following table:

## LAMP DATA—28-32-VOLT MAZDA LAMPS

Rated Size of Lamps in Watts	Type of Lamp, Straight Side	Approximate Candlepower of Lamps	Current in Amperes Consumed per Lamp per Hour
<b>Mazda "B"</b>			
5	S-14	4	0.17
10	S-17	8	0.34
20	S-17	16	0.67
40	S-19	32	1.34
<b>Mazda "C"</b>			
50	PS-20	50	1.7
75	PS-22	75	2.5
100	PS-25	125	3.4

## MOTOR DATA

Electric motors usually have a nameplate on which is marked their voltage and amperage at full load and in this way the amperage can be obtained direct.

The following table showing efficiency and current consumption in watts and amperes of direct-current motors operated on a 32-volt system will be of value for reference:

Horsepower	Maximum Efficiency, Per Cent.	Minimum Watts	Average Amperes
7/8	75	933	30
3/4	74	825	26
3/4	73	711	23 $\frac{1}{2}$
5/8	72	599	19
1/2	70	485	15
3/8	68	390	12 $\frac{1}{2}$
1/3	67	331	10 $\frac{1}{2}$
1/4	65	252	8
1/5	63	206	6 $\frac{1}{2}$
1/6	60	174	5 $\frac{1}{2}$
1/8	57	134	4 $\frac{1}{2}$
1/10	54	109	3 $\frac{1}{2}$
1/12	50	94	3

## HOW TO DETERMINE SIZE OF WIRE TO BE USED

To determine the proper size of wire to be used for any particular installation or part of any particular installation, the following general formula may be used:

(a) To find circular mils—

$$\frac{10.7 \times (\text{distance in feet one way}) \times 2 \times \text{amperes}}{\text{voltage lost}} = \text{circular mils.}$$

(b) To find volts lost—

$$\frac{10.7 \times (\text{distance in feet one way}) \times 2 \times \text{amperes}}{\text{circular mils}} = \text{voltage lost}$$

(c) To find amperes—

$$\frac{\text{Circular mils} \times \text{voltage lost}}{(\text{distance in feet one way}) \times 2 \times 10.7} = \text{amperes}$$

"10.7" is the resistance per mil-foot of copper wire.

"Feet" referred to in the above formula is the actual length of  $\frac{1}{2}$  the circuit or the actual distance from the plant to the point where the electric current is to be consumed. This distance is multiplied by 2 in the formula to obtain the total length of the wire used in the complete circuit, the complete circuit consisting of one positive and one negative wire.

"Circular mils" is the unit of measure used in measuring the area of wire. The "mil" is 1/1000 (0.001) of an inch and is the practical unit for determining the diameter and thereby the area of all wires used in electric conductors. "Circular mils" is the unit used in expressing the area of all wires used as electric conductors.

"Ampere" is the unit by which the rate of flow of electric current is measured.

"Voltage loss" refers to the loss of voltage or pressure due to the resistance of the wire to the flow of the electric current.

The voltage loss permissible for 32-volt system is 2 volts.

As 10.7 is the resistance per mil-foot of copper wire and there are two copper wires of the same size in each circuit; therefore, the resistance in the circuit is  $2 \times 10.7$  or 21.4. For convenience, therefore, in computing the proper size of wire to use for any practical installation, we recommend the use of the following general formula:

$$\text{Amperes} \times (\text{distance in feet one way}) \times 22$$

2

= circular mils of wire required.

After the circular mils of wire required has been determined by this formula, determine the size or gage of wire to be used by referring to the following table on carrying capacity of copper wire.

CARRYING CAPACITY OF COPPER WIRE

Size B. & S. Gage No.	Circular Mils	Amperes	
		Rubber Covered Wire	Weatherproof Wire
18	1,624	3	5
16	2,583	6	10
14	4,107	15	20
12	6,530	20	25
10	10,380	25	30
8	16,510	35	50
6	26,250	50	70
5	33,100	55	80
4	41,740	70	90
3	52,630	80	100
2	66,370	90	125
1	83,690	100	150
0	105,500	125	200

In the above table voltage drop has not been considered. This table conforms to the rules of the National Board of Fire Underwriters.

**Notice.** Never use any copper wire for light and power purposes of a smaller size than No. 14 gage. No. 14 gage wire is the smallest wire which you should use for any purpose, except bell wire, in connection with the 32-volt system regardless of what the use of the formula would show.

If the circular mils of the wire required as determined by the formula are not the exact circular mils of any particular gage wire as designated by the above table, always use the next larger size wire.

Never use a smaller size wire than that designated by the circular mils as worked out by the formula. It is advisable always to use a slightly larger wire than is actually necessary rather than wire that is smaller.

The different sizes of wire are known by ordinary numbers or gages—No. 0, No. 1, No. 2, No. 3, etc., up to No. 18 as shown in the foregoing table—but these numbers do not give any information regarding the mil size or area of any one wire compared with any other wire. The only thing we can determine through knowing the numerical numbers of wire is that the size of the wire decreases as the numbers increase. But it does not tell us the amount of increase or decrease. We must refer to the mil table above for this information.

It is necessary, therefore, to have some other means of knowing how wires of different sizes compare.

We could, of course, use the diameter of the wire measured say in 0.001 of an inch, but we would then have to do some further calculating in order to compare the area of one wire with the area of another wire because the amount of current that any wire will carry is determined by the area of the wire and the amount of resistance or drop in the voltage which any sized wire will cause over a certain distance.

For example, if we have two wires of the same length but the diameter of one wire is twice that of the other, the larger wire will carry four times as much current as the smaller wire. The reason for this is that the wire that has twice the diameter of the other contains four times the area. Also, a wire three times as large in diameter contains nine times the area or circular mils.

A unit of measurement, called a circular mil, is, therefore, used to make it easier to compare one size wire with another.

If we take a wire whose diameter is 0.001 of an inch, or one mil diameter, the area of this wire is one circular mil or 1 circ.mil. In the same way, a wire 0.002 of an inch in diameter, or 2-mils diameter, contains 4 circular mils in its area and a wire 0.003 of an inch in diameter, or with a diameter of 3 mils, has 9 circ.mil in its area.

If it is desired to measure the voltage at any point in order to find out what the voltage drop is, note that the

reading of the volt meter must be taken when the current is being used. If the reading of the volt meter is taken when the current is not being used, the voltage will show practically no drop and the reading is misleading.

For example, suppose we have a 32-volt  $\frac{1}{2}$ -hp. motor located 200 ft. away from the plant. If the motor is not being used, a voltmeter connected across the positive and negative wires on the sides of the switch farthest from the motor, will show practically the same voltage as the voltage of the plant.

If the switch, however, is closed and the motor running under full load, the voltmeter will show a drop in voltage, or if the wire between the plant and the motor is of the correct size, the voltage drop will not exceed 2 volts, but if the wire is too small, the drop will be greater than 2 volts and the smaller the wire the greater the drop.

Poor connections in the wiring, such as loose connections, unsoldered joints, corroded connections, etc., will also cause an excessive voltage drop, because of increased resistance; therefore, before measuring the voltage drop to determine whether or not your wire is of the proper size, be sure to see that all connections are properly made and all joints are properly soldered.

Returning again to the method of finding the correct size of wire to be used, the following three rules should always be used:

1. No. 14 wire is the smallest wire that should be used for any purpose.
2. If an individual circuit for an electric iron is to be installed, we should never use smaller than No. 10 wire because of the high current consumption of the iron.
3. To determine the size of all other wires to be used, use the following formula:

$$\frac{\text{Amperes} \times (\text{distance in feet one way}) \times 11 \times 12}{\text{voltage drop}}$$

=circular mils of wire required.

#### EXAMPLES FOR FIGURING WIRE

The following concrete examples will serve to illustrate just how the rules and formula are applied in estimating wiring jobs:

Example No. 1. What size wire should be used to light ten 20-watt lamps located at a distance of 300 ft. from the plant?

- (a) Divide watts by volts to find amperes.
- (b) One 20-watt lamp consumes  $20 \div 30$  or  $\frac{2}{3}$  amp.
- (c) Ten 20-watt lamps consume  $10 \times \frac{2}{3}$  or  $6\frac{2}{3}$  amp.
- (d) Apply formula  $6\frac{2}{3}$  amp.  $\times 300 \times 11 \times 12$   
 $6\frac{2}{3}$  amp.  $\times 300 \times 11 \times 12$   
 $\frac{2 \text{ (voltage drop)}}{2} = 22,000$  circ.mils.

(e) Refer to table of copper wires. We find that 22,000 circ.mil comes between No. 8 and No. 6 wire. The larger should be used; therefore, No. 6 wire should be used.

Example No. 2. What is the greatest distance a No. 8 wire will carry 6 amp. (allowing 2-volt drop)?

- (a) See table of wire—No. 8 wire=16,510 circ.mil.
- (b) Apply formula:

$$\frac{6 \text{ (amperes)} \times \text{distance} \times 11 \times 12}{2 \text{ (voltage drop)}} = 16,510$$

$$\text{Distance} = 16,510 \div 66 \text{ or } 250 \text{ ft.}$$

Therefore, 16,500 = 66  $\times$  distance. (Distance = 16,510  $\div$  66 or 250 ft.)

Example No. 3. How many 32-volt, 20-watt lamps can you light at the same time 150 ft. away from the plant using a No. 10 wire (allowing a 2-volt drop)?

- (a) The area of No. 10 wire=10,380 circ.mil.
- (b) Apply formula:

$$10,380 = \frac{\text{Amperes} \times 11 \times 12}{2 \text{ (voltage drop)}}$$

- (c)  $10,380 \div 1650 = 6.291$  amp.
- (d)  $\frac{2}{3}$  or 0.666 amp. = one 20-volt lamp.
- (e)  $6.291 \text{ amp.} \div 0.666 = 9$  lamps at correct candlepower.

**Note.** It is very seldom, if ever, advisable to run an outside wire for a load smaller than No. 10. It is very probable that it may be desirable later on to add more lights in the barn or the owner may want to use a power motor later. In this case, we would recommend the use of a No. 10 wire instead of No. 12 wire.

**Note.** In computing cost of installation and wiring, don't forget every circuit has two wires. Therefore, in figuring the number of feet of wire required for any circuit, multiply the distance in feet by 2 to get the number of feet of wire required for the circuit.



## Milwaukee—July 14-18

### National Association of Electrical Contractors and Dealers Announces Tentative Program for Coming Annual Meeting

**P**RELIMINARY arrangements for the coming annual meeting of the National Association of Electrical Contractors and Dealers have just been completed.

The convention will be held in Milwaukee, Wis. The executive committee of the national association will meet in that city on July 14 and 15, while the convention meetings will be held on July 16, 17 and 18.

The headquarters of the association will be at the Hotel Pfister; and meetings of the executive committee will be held at this hotel.

The meetings of the association

Registration bureau for the convention opens at the Hotel Pfister at 4 p.m. on this day, and will be open for the rest of the week.

#### JULY 15

Meetings of the national executive committee at the Hotel Pfister at 10 a.m. and 2 p.m.

#### JULY 16

The convention opens at the Auditorium at 10 a.m.

The opening address will be delivered by a representative of the Wisconsin State Association and an

At 9 p.m. of this day, the annual reception and dance will be held at the Hotel Pfister, in a large ball room.

#### JULY 17

All those attending the convention will be taken by special cars to Waukesha Beach, 18 miles from Milwaukee, and a regular session of the convention will be held at 10.30 a.m., at which there will be an address by W. L. Goodwin, and also an address on the general business conditions by a speaker to be selected.

Lunch will be served at Waukesha Beach, and the afternoon devoted to sports.

#### JULY 18

Sessions at the Auditorium in Milwaukee. At the morning session the organization will be divided into sections, one discussing merchandising and fixture dealing, one discussing the handling of machinery repairs, and one being a meeting of State and local secretaries for the purpose of discussing association work.

Afternoon session at 2 p.m. in the Auditorium, which will be devoted to matters referred to the session by the executive committee.

At 6.30 p.m. on this day, the annual dinner of the association will be given at the Hotel Pfister.

All of the indications point to a successful convention. A larger attendance is expected than has marked any convention in the history of the association.

### A New Word for the Jobbers' Salesman

In the electrical trade such items as washing machines, irons, vacuum cleaners, etc., are commonly spoken of as appliances. Recently with the growth of the farm-lighting plant business there has been an infusion of new blood into the trade. These new men have brought some of their vocabulary with them. They insist that washing machines, power stands, electric irons, motor-driven churns, dish washers, etc., are *accessories*. And so they are—accessories to the farm plant.

Jobber's salesmen calling on these new electrical dealers would do well to keep this word in mind. *Appliances* means nothing specific to these dealers. *Accessories* has a definite meaning because these dealers are already getting *accessory* catalog's listing devices which the electrical trade has called appliances.



Here's the hub of the retail electrical world in July—Milwaukee, and the official hotel headquarters of the Executive Committee of the National Association of Electrical Contractors and Dealers. The general sessions of the annual convention will be held in the Auditorium, located not far from the official headquarters.

will be at the Auditorium in Milwaukee, excepting on Thursday, when the meeting will be at Waukesha Beach, one of the suburbs of Milwaukee.

The tentative program of the meeting is as follows, but, of course, may be subjected to some modifications:

#### JULY 14

Meetings of the national executive committee at the Hotel Pfister at 10 a.m. and 2 p.m.

address of welcome will be delivered by the Governor of the State.

Response will be made by the chairman of the national association, W. Creighton Peet of New York. This will be followed by an address on co-operation, speaker to be selected.

Meeting at 2 p.m. at which there will be a lecture on the standard cost accounting system, illustrated by a lantern slide, and an address on estimating methods, also illustrated.

## N. E. L. A. Committees Arrange Convention Program

Domestic, Commercial and Industrial Lighting to Be Featured by Exhibits, Lectures and Reports at Atlantic City Gathering May 19-22

SIX committees of the National Electric Light Association held meetings in Chicago on March 24, 25 and 26. In these meetings the plans of the committees were crystallized and definite programs were worked out. The committees were the lighting sales bureau, the power sales bureau, the merchandising committee, the executive committee of the Commercial Section, the overhead-lines committee and the safety and accident prevention committee.

Some of the reports which will be submitted by the lighting sales bureau are on the commercial aspects of lamp apparatus, electrical advertising, outdoor lighting, residence lighting, lighting of public buildings and store lighting. There will also be a paper on probable causes of decreases in revenue and methods of remedying these conditions. W. A. Durgin, Chicago, will make an address and give a demonstration on industrial lighting. The power sales bureau plans to discuss live topics of the day, particularly those in which interest was stimulated by the war. Discussions from the floor rather than set papers will prevail in this meeting.

The topics to be discussed include

electrochemistry, the effect of the war on isolated-plant costs, electric furnaces for the three purposes of melting steel, melting non-ferrous metals and heat-treating metals, electric welding, desirability of correcting power factor in customers' installations, and industrial electric trucks and tractors.

The efforts of the merchandising committee will be confined mainly to bringing its 1915 report up to date. Important features of the report will be data on a uniform accounting system, discussions of merchandising profit and advertising by small stations.

The principal topic before the overhead-lines committee was inductive interference. The safety and accident prevention committee devoted considerable time to the National Electrical Safety Code.

An interesting feature is being planned for the purpose of expressing to the industry what has been called "The New Spirit of Lighting." It is the new attitude toward the subject of lighting which has been bred by the war and post-war conditions that has for its objective the economic adaptation and application of lighting in its many fields.

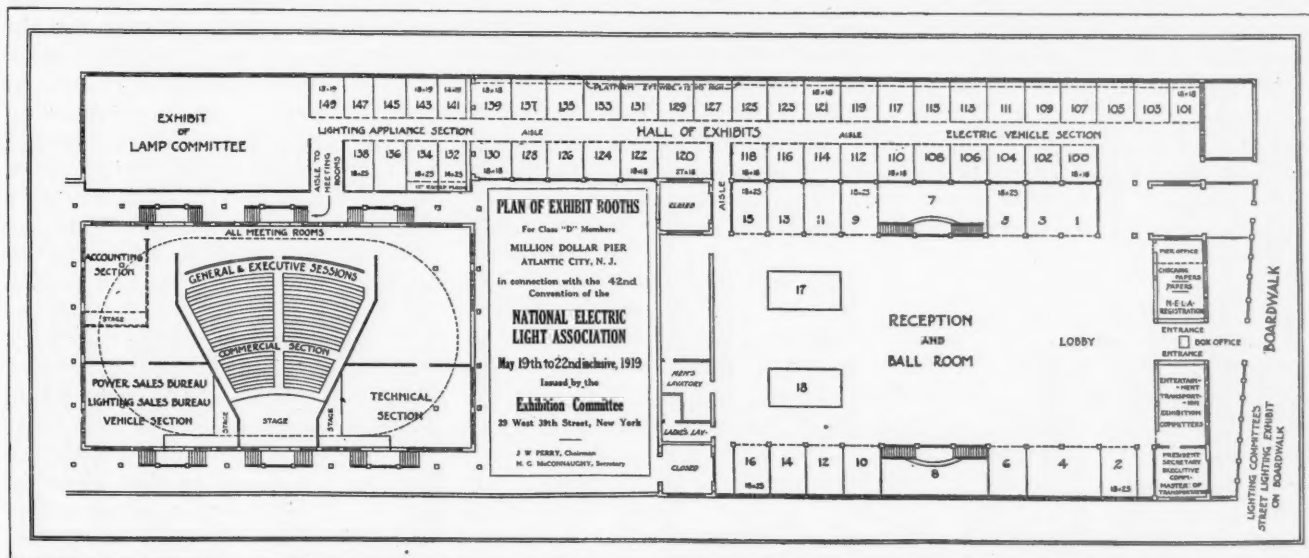
Through the co-operation of the

N. E. L. A. Lamp Committee and the Lighting Sales Bureau of the Commercial Section, these more interesting aspects of modern lighting are to be presented in the form of a special exhibit which will be composed of ten separate booths or sections, the outstanding features of which will be very elaborate presentations of industrial, show-window, and home lighting. The industrial lighting exhibit, for instance, will be a modern machine shop with machinery representing several classes of industry installed and running.

For the purpose of demonstrating the best modern standards of show-window illumination, a life-size window will be installed in which there will be a practical display of merchandise. This show-window will be equipped with some fifteen different systems of show-window lighting, demonstrating different intensities of illumination from different directions.

Among entertainment features are dinners to be given by the lighting sales bureau and the power sales bureau. In order to be able to stage a still more elaborate entertainment program these two bureaus will combine after the dinners in a joint celebration.

PLAN FOR EXHIBITS AT ATLANTIC CITY CONVENTION OF NATIONAL ELECTRIC LIGHT ASSOCIATION



The exhibition committee of the National Electric Light Association has announced that great interest is being taken in the plan for exhibits to be held in connection with the annual convention at Atlantic City during the week beginning May 19. J. W. Perry is chairman of the committee and H. G. McConaughy secretary.



## Getting 1250 Estimates and 1007 Contracts for Wiring Old Houses

How Twelve Salesmen Are Handling the Spring House-Wiring Campaign of the Duquesne Light Company, Pittsburgh—What the Offer Covers—How it Was Advertised

By J. M. ORR



A four-light shower, solid brass, with canopy and pan and shades, and controlled by a flush switch, was offered for the living room.



A one-light pendant, solid brass, with shade, and controlled by a flush switch was offered for each of the other rooms in the house.



A three-light shower, solid brass, with attractive shades and controlled by a flush switch, was offered for the dining room.

THE Duquesne Light Company, Pittsburgh, Pa., has been conducting a highly successful old-house wiring campaign in Pittsburgh. The opening guns were fired on Jan. 13, when half-page spreads appearing in the Pittsburgh newspapers on that date announced the offer to the people. The advertising started a perfect deluge of requests for estimates which has kept the representatives of the wiring and contracting departments on the go ever since.

The lighting sales force of the company, numbering twelve men, hustled out in response to the inquiries with the result that 609 persons were induced to sign on the dotted line during the first month. This figure represented 75 per cent of the inquiries received, a record which reflects great credit on the sales organization. On account of the unanticipated volume of business closed during the first month, which nearly swamped the wiring department, it

was found advisable temporarily to suspend all advertising until the wiring department could catch up with the work. Up to March 24, the Duquesne company had received 1250 requests for estimates and 1007 contracts had been closed.

The offer made by the company is for the wiring of six outlets, concealed knob and tube work, complete with fixtures, each outlet controlled by a single pole flush switch, for \$79.75, \$50.25 of which is for the wiring and \$29.50 for the fixtures. The work is absolutely first class in every particular, and more than complies with the rules of the Board of Fire Underwriters and the Bureau of Electricity of the city of Pittsburgh. Where more than six outlets are desired, they are charged for at prices proportionate to the

six-outlet offer, and in this connection it is interesting to note that the majority of the contracts closed are for more than six outlets and include three-way and baseboard outlets, which also are additional to the basic proposition.

The fixtures furnished are: a four-light shower for the living room, a three-light shower for the dining room, and one-light pendants for each of the other rooms. As can be seen by the accompanying illustrations, these fixtures are of rather a conservative design, quite distinctive from the ordinary and very pleasing to the eye. They are solid brass throughout, including the chain, and are constructed to be hung in a room 9 ft. high; but for a slight additional charge they may be lengthened if the ceiling is more than 9 ft. high. Each customer is asked to visit personally the company's fixture showroom before his fixtures are hung, so that if he is not satisfied, he may select something else from the large stock carried at all times.

Seven outlets with fixtures are \$89.75; for eight \$99.75; for nine

## SPECIAL HOUSE WIRING OFFER



Living Room



Bath or Bed Room



Kitchen

- ¶ We will wire six rooms to permit the use of electricity and install six fixtures, similar to those shown herewith, for \$79.75, payable \$8.25 upon completion of work and \$6.50 per month for 11 months.
- ¶ These fixtures are of solid brass, with brushed brass and black finish, and are first class in every particular.

### THIS BARGAIN INCLUDES:

- ¶ **LIVING ROOM**—Wire for one ceiling outlet, with four-light electric shower, solid brass, with canopy and pan and shades to diffuse and soften the light; controlled by flush switch.
- ¶ **DINING ROOM**—Wire for one ceiling outlet, with three-light electric shower, solid brass, with attractive shades; controlled by flush switch.
- ¶ **BATH ROOM**—Wire for ceiling or wall outlet, with one solid brass fixture, either pendant from ceiling or as wall bracket, with shade; controlled by flush switch.
- ¶ **KITCHEN**—Wire for ceiling or wall outlet, with one-light electric stem fixture, solid brass, oxidized copper finish, with glass shade; controlled by flush switch.
- ¶ **TWO BEDROOMS**—Wire for ceiling or wall outlets, with one-light solid brass fixture in each room, either pendant from ceiling or as wall bracket, with shade; controlled by flush switch.
- ¶ All wiring will be done by expert wiremen and with the best of materials. No damage will be done to ceilings, wallpaper or woodwork.
- ¶ All switches are of the standard push-button type, with solid brass plates in brushed brass finish.
- ¶ This bargain proposition for wiring six rooms is merely a sample. Proportionate prices for additional rooms and fixtures.
- ¶ This proposition is limited to houses located on our lines.
- ¶ We invite those interested to inspect this set of fixtures, as well as a complete line of other types of electrical fixtures, at our Fixture Department, Kirkwood and Whitfield Streets, East Liberty, one square from Highland and Penn Avenues.
- ¶ Call wiring department, Hiland 6700, for further information. We will take pleasure in sending a representative to talk over this proposition with you. His services are free.
- ¶ We make a specialty of wiring old houses, having wired in the last few years almost 15,000 houses in Pittsburgh and vicinity, the owners having been completely satisfied with the splendid work done—the neatness and expertness of our wiremen and the low price asked.

**Duquesne Light Co.**

Kirkwood and Whitfield Sts.,  
East Liberty, Pittsburgh.



Dining Room



Bath or Bed Room



Bath or Bed Room



Flush Switch

in a reasonable time with its own workmen. The light company has always tried, in every way, to cooperate with the local contractors. The only wiring done is in existing buildings on the company's own lines. No new work on new buildings is touched.

### "Electrify Your Home"

(Continued from page 182)

back in specified monthly installments paid by the customer.

Upon completion of the job the contractor secures the signature of the customer on an "O. K. letter" and forwards this to the company. This letter states that the completed work has been approved by the Board of Fire Underwriters and city department, and the certificates having been issued to the customer, it also requests him to signify his approval of the work. Upon receipt of this letter the company sends out a statement authorizing payment.

New fixtures are used in the present campaign. A "center control switch" is used, by means of which one or more sockets may be turned on without touching the socket itself. An improved pull-chain socket is used. This is especially designed for the proper operation of electrical appliances. All sockets provide 660-watt capacity. The company has standardized on fixture lengths at 48 in.

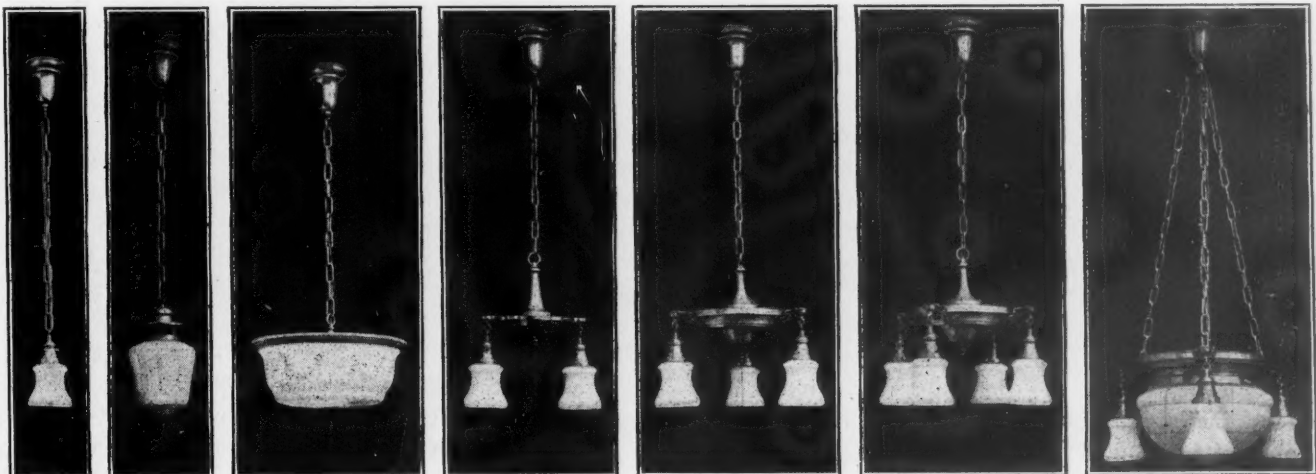
The features of the new plan are fully explained in a new booklet entitled the "New Edison House Wiring Plan," which shows cuts of the fixtures and gives the detail of the cost of wiring and the partial-payment offers.

\$110.70; for ten \$119.35; for eleven \$128, etc. The customer is encouraged to wire his home completely by allowing him to pay for the work on a partial-payment plan in as many as twelve monthly installments with no added percentage for carrying the account. Of course, all accounts must have their payment guaranteed, either by the customer himself owning the property to be wired or by having some property owner guarantee payment.

The work is all handled by the company's wiring department, which, on account of the large amount of business closed, has found it necessary to sublet a portion of the wir-

ing work to certain reputable electrical contractors in the city, who are paid by the company in thirty days after the work is completed, at the same price charged the customer less a small percentage for carrying the account on monthly terms and taking the credit risk. The fixture work is all done by the company, none of it being sublet.

The only advertising done was the half-page spread by the light company, a reproduction of which is shown. The contractors of the city shared in the proposition, in that they were given the surplus of work over what the wiring department of the company could take care of with-



Sets of fixtures of the Adams design selected for the Brooklyn Edison house wiring offer. The soliciting of orders is done entirely by the salesmen of the central station, but the actual installation is done by the contractor selected by the customer.



# Electrical Merchandising

The Monthly Magazine of the Electrical Trade

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## The Other Fellow's Sales Plan

**A**MONG electrical people a great deal has been said and written about the efficiency and the wonderful success of department store merchandising. The sales methods of these commercial giants have been lauded indiscriminately. An obvious thing for electrical merchants to do was to observe the department stores' methods and adopt them in their entirety. The fact is that this has been done in some places.

That is the sad part of it. The department store plans have been adopted without regard to their applicability to the case at hand. The result has been a misfit, a failure, disappointment, and distrust of department store methods as a whole. That is also an undesirable condition.

Some methods used by non-electrical merchants in the sale of both electrical and non-electrical goods are appropriate for adoption by the electrical merchant. Some may be adopted as they are; others must be adopted only in general plan and modified as to detail. The wise merchant in every instance first will critically analyze his sales problem as such, then he will fit this or that sales plan to it, with particular regard to the requirements of the case, and with secondary regard to the prior use of the plan by a department store.



## Get Rid of Your Dead Stock

**O**F ALL the fatal business diseases, one of the worse is "dead stock." Dead stock eats up the profits and the capital as well. The money invested in it cannot be used and usually the money invested in it cannot be gotten out of it. The money invested in it is not earning anything, is not working, and is decreasing in value.

It is far better to bury one's money in the back yard than in dead stock. The back yard has the great advantage that when you want the money again it requires very little effort to go and dig it up. While it is buried you lose the interest upon it but you don't lose the money or at least a part of it as well, as is the case if you have it buried in dead stock.

If a business is to succeed, if it is to show a profit at the end of the year, it is necessary that the dead stock be disposed of. It is better to burn it or junk it than to have it filling up valuable space and cluttering up the establishment. Don't try to save it until you can get out of it what you paid for it. It is better to get a little money back and use that little money with which to make more money than to continue to keep all the money tied up.

Dead stock indicates both poor buying and poor salesmanship. Get rid of it. It will hurt your credit at the bank. It ties up your capital and reduces your profits. Eventually if you don't get rid of it enough will accumulate to drive you out of business. Every business man must keep his dead stock down to the minimum if he is to make maximum annual profits.

## Buying from the Customer

**T**HERE is an old business adage that an article well bought is half sold. A lot has been said and printed about the selling end of business. Finding new twists in salesmanship has long been a popular sport. Yet for every "sale" there must be a "buy," and the average electrical contractor prides himself on being a good buyer. Doubtless most contractors believe they have learned nearly all there is to know about buying and have had a close-up for every angle of the game. But there is one angle of buying which may not have been given very much thought by many of us.

Every electrical business man is buying every day, not from the jobber or factory but from his own customers. Perhaps this fact has been so universally overlooked that the reality of buying from the customer may be questioned.

The kind of buying referred to is not the purchase of tangible things. We know a business man who, if he has a complaint and a request to look after some prospective work handed to him at the same time, will go after the complaint first. This man is buying goodwill, satisfaction, influence, praise of others; all of which creates the buy-again habit.

A customer comes to buy the products, or labor, or both, of the electrical contractor. In selling these there is the opportunity to buy a large slice of good feeling and commendation to others. There is no reason why the electrical contractor, like any other businessman, should not acquire a distinction all his own and a commercial reputation that is a big asset. It can be made to stand high, because people say that there can be found unusual courtesy, personal interest in individual preferences, thoughtfulness, intelligent application of the mechanical principles of the trade, and consideration of personal desires.

There are lots of things that the customer of the electrical contractor has to sell and it will pay him to give much time, thought and study to "buymanship" as well as salesmanship. These two are closely linked together, and together they spell success.

# IDEAS FOR THE MAN WHO SELLS



*Plans, Schemes and Methods to  
Increase Sale of Electrical Goods*



## Keep the Truth About Electrical Appliances Before the Public

BY T. H. KETTLE

The problem of keeping the word "Electricity" and the every-day usefulness of electrical appliances before the public is one that deserves the most careful and level-headed attention of every central station, contractor, dealer and jobber.

The central station should take up more seriously than ever before the problem of advertising its goods and service, if for no other reason than to keep its name before the public. The public has an extremely short memory in these days of world-changing events, and if the industry as a whole allows the attention of the public to be carried away by the tremendous advertising campaigns of other industries, it means that \$2 will have to be spent later what one will perform now. There is only one way to knock an idea out of a man's head and that is put another one in, and if the electrical industry is to hold an important place in the mind of the public interesting facts and figures must be supplied to that mind.

Electrical dealers are also in a position to create favorable impressions and to see that false impressions are promptly run down and counteracted. Only recently one of the most progressive Minneapolis dealers proved his effectiveness at this sort of thing. According to this dealer, a large number of people are under a false impression as to the cost of operating electrical devices. In fact, to use this dealer's words, "Thousands of people are unconsciously Anti-Electrical." He stated that he has reached the conclusion that nothing but a continuous advertising campaign can educate the women of this country to a full realization of how little the cost of operating electrical appliances really is. I cite his effort to do this as an assurance that the electrical dealer has facilities for stopping false propaganda and for coping with it.

The first of this dealer's series of

educational advertisements is shown, herewith, and such a series is sure to leave a favorable impression on the mind of the reader, whether she buys or not. This dealer is sure to succeed.

The point I want to make is this: We must keep the truth about electrical appliances before the public in order to run down the ill-advised and misinformed. We must remember that each of us, each central station and dealer, has in his keeping the good name of the electrical industry, and things electrical; that business intelligently advertised will keep goods moving and good-will increasing, while a business that positively refuses to advertise always eventually comes to grief; that our advertising is the voice of our business,

seeking good-will among the buying public, a better understanding of our product, and a more sympathetic appreciation of our service.

## Mazda Lamps by Mail

The Duquesne Light Company, Pittsburgh, Pa., has recently inaugurated a plan of selling Mazda lamps by mail, in 10-watt to 40-watt sizes inclusive. A telephone call or postal card to the electric shop of the company will bring as many lamps as the customer may desire by return mail and the charge is added to the next bill for service.

Breakage in transit, which precluded the adoption of this plan before, is now reduced to an almost negligible percentage by the adoption of a special corrugated-box package. The postal authorities will not insure the lamps, on the ground that they are too fragile, but the company will replace any lamps found defective if they are tested upon receipt.

Early indications point with favor to the plan, but it is most too new at this time for local officials to make any definite prediction as to its ultimate success.

## Ad-Writing Facilitated

BY ED. L. FRANKLIN

The preparation of advertising literature is one of the bugbears of the average retailer's existence, providing, of course, he makes a really earnest attempt to produce something with pulling power.

A Pennsylvania dealer is solving this problem in a very satisfactory and efficient manner. The plan worked out enables him to produce very effective copy with the minimum expenditure of time and mental effort.

This merchant makes a very careful study of good advertising matter of all kinds, and every time he finds a headline, a phrase, sentence or paragraph which may, with possibly some alterations, be adopted by him, he clips it out and pastes it in a little scrapbook which he keeps for just this purpose.

In this way he has collected a vast amount of bright, catchy, forceful literature, and with this before him the task of constructing strong, result-producing copy is materially lightened, and the time and energy thus conserved is applied to other phases of the business.

### \$2.48

#### WORTH OF ELECTRICITY

Residential lighting rates in Minneapolis are 10¢ for first three kilowatt hours per month, 15¢ for the next three kilowatt hours—5¢ for all in excess, with 5% discount when bill is paid promptly. This makes an average cost of 6¢ per kilowatt hour.

We sell only the highest quality Electrical Appliances that CONSUME THE LEAST CURRENT. Following is a partial list of our standard Electrical Merchandise. Note the SPECIAL PRE-PAID PRICES.

**\$2.48 worth of electricity will operate all of these electrical necessities for a month or thirty-one days.**

<p><b>25-WATT EDISON MAZDA LAMP</b> Suggested price \$1.00 Special price \$0.50</p>	<p>Four 25-watt Edison Mazda (the lamp that lasts longest and consumes least current) will operate, four hours every day for thirty-one days at a cost of ..... \$1.50</p>
<p><b>THERMAX IRON</b> Suggested price \$1.00 Special price \$0.50</p>	<p>The economical Thermax iron will operate four hours a day each of your four ironing days a month at a cost of ..... \$1.00</p>
<p><b>UNIVERSAL TOASTER</b> Suggested price \$0.50 Special price \$0.25</p>	<p>A Universal Toaster in fifteen minutes makes delicious brown toast for a small family. Operating this toaster every morning for thirty-one days will cost ..... \$1.75</p>
<p><b>COROLLA PERCOLATOR</b> Suggested price \$1.00 Special price \$0.50</p>	<p>The Corolla Percolator used fifteen minutes at breakfast time and fifteen minutes at dinner time will make most palatable coffee for seven people. At a cost of thirty-one days operation of ..... \$0.50</p>
<p><b>THERMAX GRILL</b> Suggested price \$1.00 Special price \$0.50</p>	<p>A Thermax Grill will boil, fry, grill and make delicious brown toast. To operate it one-half hour every day, for thirty-one days, it will cost you ..... \$0.50</p>
<p><b>HOT-REST OR UNIVERSAL HEATING PAD</b> Suggested price \$1.00 Special price \$0.50</p>	<p>Hot-Rest or Universal Heating Pad are the kind recommended by Physicians because of their steady uniform heat that can be regulated high, low or medium. They are perfectly safe. You can operate one an hour a day for thirty-one days for \$0.50.</p>
<p><b>SEWING MACHINE</b> Suggested price \$1.00 Special price \$0.50</p>	<p>This wonderful little motor, takes the drudgery out of sewing by doing away the treading. A gentle press of the foot runs the machine as fast as you desire. To operate this motor six hours per week, for four weeks will cost you ..... \$0.50</p>
<p>Total operating expense of all above Appliances for period of one month ..... <b>\$2.48</b></p>	

This ad is published to enlighten you, the next time you hear anyone stating that they cannot use Electrical Appliances because they are too expensive to operate, remember the authentic figures quoted herein. **THANK YOU.**

**STERLING ELECTRIC COMPANY**  
29-31-33 South Fifth Street  
S. W. Hall 112 "Service and Satisfaction With Every Transaction" Jan. 1919

To counteract mistaken impressions as to the cost of operating electrical appliances and to give exact figures on the cost of operation, a Minneapolis dealer prepared a series of educational advertisements, the first one of which tells exactly what \$2.48 worth of electricity will buy.



## Display Windows on Wheels

Automobile delivery wagons that serve as display windows on wheels are now used with profitable results by Hoover suction sweeper dealers in the Southwestern territory.

The combined delivery car and portable showcase, illustrated here, is the creation of F. M. Rhed the Hoover sales manager for the Southwestern district, with headquarters in Kansas City. It consists of a Ford chassis on which is mounted a body of special design, costing \$250, and finished in steel gray and gold, with black running gear and wheels, to harmonize with the color scheme of the Hoover cleaner.

The upper compartment of the car, where the Hoover is exhibited, has a hardwood floor on which a small oriental rug is spread. An electric light in the top illuminates the attractive display window on wheels at night. The lower section is used for storing machines for delivery and is large enough to accommodate twelve cleaners.

These distinctive delivery cars are now being used in Kansas City, Oklahoma City, St. Louis and Dallas, and during the present year additions will be made to the Hoover fleet, twelve of these automobiles being put in service in Kansas alone.

The car, so far, has had two distinct uses. In the larger cities, like St. Louis and Dallas, it is both a delivery wagon and a service car. In the smaller communities it not only

makes deliveries but performs an efficient service in conducting an active campaign for the sale of Hoovers throughout the country districts to owners of farm-lighting outfits and is used, as well, in rounding up satisfactory dealers in small towns where electric lighting is enjoyed.

## Enlisting Outsiders

BY F. L. EDMAN

In an ingenious way a large city dealer in the Central West recently succeeded in recruiting the help of consumers in the task of forcibly impressing the public with the practicability and general desirability of cooking with electricity.

A strong advertising campaign on the Blank electric cooker was launched, all advertisements strongly playing up five big advantages of the Blank electric range, and offering a \$10 credit on any appliance in the store to the person submitting the best suggestion for a sixth.

Certainly this advertising was of immense practical value to the merchant, for it not only was the means of gaining for him a vast amount of general publicity, but got consumers to thinking on the subject of cooking by electricity, particularly with the Blank range.

And surely no one can question that anything which stimulates favorable thought concerning a commodity is sure to exert a far-reaching influence for good.

## The Power of the Partial Payment in Selling an Electric Range

BY J. E. BULLARD

The following is an adaptation of an actual sales talk given by a salesman of a concern selling a \$100 specialty on the partial payment basis. The prospect has come into the salesroom and has been approached by the salesman who goes about it somewhat as follows:

*Salesman:* "Yes, Mrs. Brown, this is the electric range about which you have been reading so much recently. It is the most modern and the most wonderful way of cooking. We call it sunshine cooking because it is the most direct way of utilizing the heat of the sun which in the final analysis is the only heat we have, you know. When the electricity is generated from water power no fire enters into the generation of heat.

"I want to call your attention especially to the fact that when you use electric heating you do not have to use matches or other lighting appliances. As you see you simply turn this little switch to the degree of heat you desire and the cooking begins. You can see that it is neat, clean and absolutely odorless. There is nothing that can get out of adjustment, therefore, you will find your cooking bill as low after you have used your range for a year as it is the first month after the range is installed.

## WHY ELECTRIC COOKING IS ECONOMICAL

"You will note that this range has a baking oven, a special broiler and four hot plates. This equipment enables you to prepare a whole dinner in the shortest possible space of time and at the least expense. Within a day or so after the range is installed we send a lady demonstrator to your house to show you how you can secure the very best results from the range. Since the cooking of food by electricity is by far the most sanitary and the most modern way, we wish to show every purchaser how it can also be made the most efficient way, for it is a fact that with most fuels a person is forced to waste more than is actually used to produce results. With coal it is estimated that 98 lb. out of every 100 lb. burned is wasted. We can show you how to use the electric range in such a way that out of every 10-cents worth of



The upper compartment of the car, where the Hoover is exhibited, has a hardwood floor on which a small oriental rug is spread. At night an electric light in the top illuminates this window display on wheels.

electricity you pay for, more than 9-cents worth will do really useful work. You see, this range is built on the fireless cooker principle and the hot plates cannot coat your pots and pans with soot, thus preventing all the heat reaching the food you are cooking."

Mrs. Brown: "That is all very well but how much does this fine range cost?"

Salesman: "The cash price of this range is \$100."

Mrs. Brown: "Oh! I could never pay that amount for a range."

#### THE TRIAL INSTALLMENT OFFER

Salesman: "Mrs. Brown, we are very anxious to have a few people who have the taste and the judgment that you have try these ranges and tell us what they think about them. I will tell you what I would like to do. I would like to place this range in your kitchen and let you try it. The company is glad to have me do this if you will show your good faith and willingness to try it to the extent of depositing a dollar. After you have used the range for a month or six weeks if you like it well enough so that you think you would like to keep it you may send us \$4 a month with your electric bill until the range is paid for. You see, in that way the range would pay for itself. It would save so many steps and prepare the food so perfectly that I am sure you would consider it worth more than about 14 cents per day to have it in the kitchen."

Mrs. Brown: "I don't mind trying it for a month. If I don't like it though, I am going to send it back at the end of thirty days."

Salesman: "You always have that privilege, Mrs. Brown. You know we are selling electricity and cannot afford to sell anyone an appliance that does not give her perfect satisfaction. If you will just sign this order for the installation of the range I will give you a receipt for the dollar. I am sure you will consider this range one of the greatest acquisitions you have ever made to your home."



#### Selling the Discount Day Crowd

By J. M. WALSH  
Scranton Electric Company

FOR a "big drive" in merchandising, half the battle lies in massing the prospects for your attack. Have you ever stopped to realize the possibilities in the throngs which fill the central station office on the last days of the monthly discount period? Users of electric service, every one of them, and with this call at the electric company's office in their mind all day, they make a fine front for the clever advances of the wideawake central station.

Special continuous demonstrations, on these days of the comfort, cleanliness and convenience of "doing it electrically," will add much to the credit of the appliance department.

#### A "Five-Dollar Window"

McDonald & Wilson, Toronto, had an excellent \$5 window recently, reports the *Electrical Dealer* of that city. Centrally in the window tastefully printed and surrounded with a sketch of poinsettias and holly was a list of articles which could be purchased for \$5. At the top of the list was a \$5 bill and the arrangement, minus decorations, was as follows:

#### FIVE DOLLARS

(A REAL BILL)

#### Will buy any of these:

Auto Lamp	Hot Plate
Boudoir Lamp	Electric Iron
Desk Lamp	Piano Lamp
Disc Stove	Reading Lamp
Flashlight	Toaster
Xmas Tree Outfits	

A sign idea that will get business not only at Christmas but at other seasons also.

Tastefully arranged around the window were a number of these articles. The lamps were on an elevation at the back of the window, and a card in the center, placed so it also could be seen by passers-by, read:

#### Electrical Gifts are Always Useful Gifts

While naturally this was a Christmas window, the idea of having a one-price window is a good one which can be used almost any time.

#### Have You Adequate Shelf Space in Your Electric Shop?



In the electric shop more than in any other kind of store, proper shelving is of the greatest sales value in displaying goods on sale. These pictures show what careful attention has been given to proper wall shelves by those in charge of the electric shop of the Narragansett Electric Lighting Company at Providence, R. I.



Not only are the usual standard horizontal shelves provided for fans and other staple merchandise, but a novelty has been introduced in the form of compartment spaces for displayed portable lamps so that each lamp is exhibited in attractive isolation. Note also the floor pedestals provided for displaying fans.



## HINTS FOR THE CONTRACTOR



*Ideas on Estimating, Stock Keeping, Shop and Construction Methods, and Collections*

### What Standardized Residence Fixtures Mean to the Dealer

By E. L. MOORE

The Art Metal Manufacturing Company,  
Cleveland, Ohio.

The great war's greatest lesson to the business world was the value of standardization. Of recent years this cardinal principle of efficiency in business has been rapidly gaining in consideration and importance here in America, but the world-wide conflict has emphasized this importance to the point where the entire business world has now awakened to it.

The residence-lighting fixture industry has been one of the last to respond to the call for greater efficiency through standardization, when it should have been one of the first, for the simple reason that lack of standardization here has been responsible for most of the industry's troubles and worries, especially as regards the retail dealer.

That dealers generally have finally reached the point where they recognize the crying need for standardization as a relief from these troubles and worries was evidenced at their recent convention at Pittsburgh, where it seemed to be the one topic

uppermost in the minds of those assembled there.

Every dealer can readily appreciate what the advantages would be to his own business to be able to handle a completely standardized line of better-grade fixtures around which he could center most of his selling and buying efforts.

With such a line, he could not only place his business on a modern basis, but he could make more money by getting away from continual price-cutting competition and sell goods which, because of their higher selling prices, would mean greater profit per sale.

And dealers who have "seen the light" and tried it out all agree that it's just as easy and takes no more time or effort to sell good fixtures than the cheaper kind. Aside from the increased profit, it means a great deal more to him in the satisfaction derived by his customers from the better grade fixtures.

With the proper kind of educational and selling effort it would be no time until any average dealer could have at least 75 per cent of his trade buying better goods.

The advantages of standardization as applied to residential lighting fix-

tures are so many and marked that no dealer who hopes to grow and make money ought to delay a single day in taking advantage of every opportunity to put it in practice in his own business.

It means cutting down investment as much as 50 per cent, through eliminating multiplicity of styles and the prevention of accumulation of "dead" stock. It makes possible more frequent turnovers, so essential to the health of any retail business, also eliminates speculation in the buying of questionable numbers. It saves time in selling effort and it saves the customer's time in buying, because there is not the confusion due to the carrying of an endless display of styles.

Furthermore, it insures prompter delivery on the part of the manufacturer, who having standardized his lines is able to produce his product in quantity and carry an adequate stock without the danger of losses. Which, in turn, means the saving of many an order for the retailer through his ability to render prompt service to his customer.

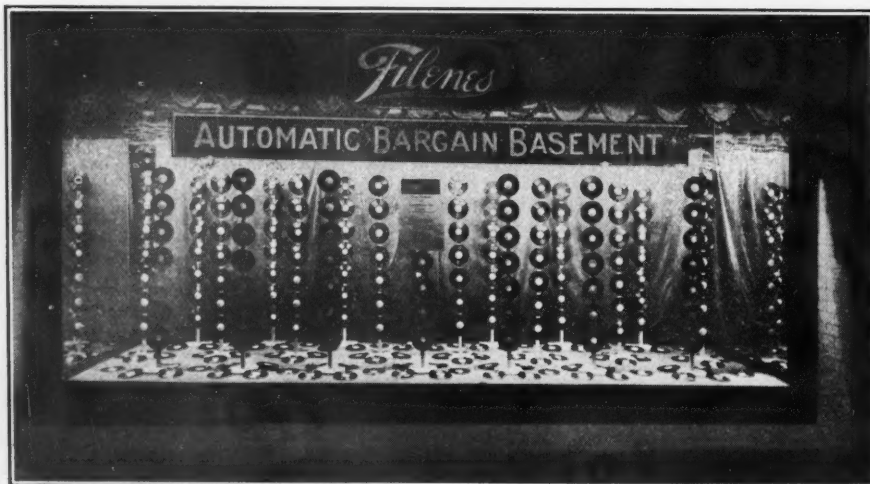
### Teach Central Stations to Consider Contractors' Interests, Urges Davenport

By H. S. KNOWLTON

"It is customary for the speaker to tell you how glad he is to be here, but I can truthfully say that I really am very glad to be here; in fact, I am always glad to be with the contractors," declared E. R. Davenport, sales manager of the Providence (R. I.) central station company in addressing the Massachusetts association of contractor dealers recently.

"It may be that on account of my rubbing elbows with the contractors for more than twenty years I can appreciate their viewpoints and position perhaps a little better than the average central station man. I have always found the contractors to be mighty all-round good fellows. Right here I want to say that I have never taken up a proposition with our general manager, A. B. Lisle, that had any relation to the contractor but what his first question was: 'Well, now, how is this going to affect the contractor?' and it seems to me that that is exactly the viewpoint that every central station should have. The trouble is that we are too selfish and don't consider

### Electric Lighting Aids Subway Window Display



A display of talking machine records in one of the subway windows of the Filene store, Boston, Mass., shown herewith, was greatly enhanced by an installation of concealed reflector lamps, thirty 60-watt units being provided to flood the window and bring out the contrasts on the records. The records were mounted in groups of seven each on wooden standards fitted with nails and also shown face up on a white background. The absence of glare and even distribution secured made the window unusually attractive.

the other fellow as much as we should.

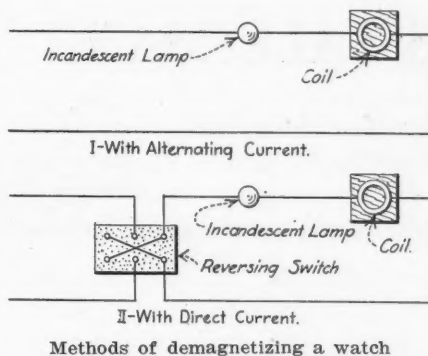
"The contractor associations should educate the central stations in their communities to the viewpoint I have just suggested. We want to see more of you contractors attending our conventions. I am even going to venture to suggest joint conventions. I don't mean by this any consolidation, because I think each branch must necessarily have its separate working organization; but in order to encourage a larger attendance at the conventions of the New England Section of the National Electric Light Association, would it not be possible for your contractors' association to hold its convention at the same time and the same place as the central station, but with each conducting separate sessions? In this manner more central station men probably would, by invitation, attend your contractors' meetings and vice versa, because you would have made it easier for both parties to get together; and the more that each learns of the other fellow's problems the better off both will be."

### Methods of Demagnetizing a Watch

BY L. M. FISCHER

In the attached illustration are diagrammed arrangements which have been used for demagnetizing watches with alternating current and direct current, respectively. In either case the coil may be an old transformer coil or one from some similar device. When used on a 110-volt lighting circuit, an incandescent lamp is connected in series with it to limit the current. On an alternating-current circuit (I) with the current flowing through the coil, the watch, which should be attached to a string a few feet long, is suspended in the center of the coil. Then with the alternating current still flowing through the coil, the watch is pulled vertically to a distance of 3 ft. above the coil. Meanwhile the string should be twirled in the fingers so that the watch will revolve.

Where only direct current is available the procedure is practically the same, except that while the watch is being raised out of the coil with the string, the reversing switch is constantly thrown from one side to



the other so that the current through the coil is an alternating current. It is essential in both instances that the watch be moved entirely out of the coil while the current is flowing through it.

### Wiring Chart for 110, 115, 120 and 125-Volt Country Home Wiring

A wiring chart (pocket-size) for determining the proper wire size for use on circuits of 110-125-volt country home lighting systems has just been prepared by the engineering department, National Lamp Works of General Electric Company. The steady demand for the low voltage (28-32 volts) wiring chart for country homes, distributed in July of last year, shows that the information contained thereon is valuable and conveniently arranged. For this

reason, the chart on 110-125-volt systems is designed along the same lines. However, to aid in distinguishing the two charts, the new one is salmon colored and is contained in an envelope on which the printing is done in dark red. Additional technical data appears on the heavy envelope which contains the chart.

In connection with the high- and low-voltage systems, it should be noted that there is a fundamental difference between the two designations, 28-32-volt lamps and 110-125-volt lamps. In the first instance, a single class of lamps, any one of which is designed to operate on any voltage within the range indicated is referred to; but in the latter case there is a different lamp for each individual voltage between 110 and 125. While the characteristics of all the lamps in this range are such as to allow of their being grouped together for many purposes, as in the wiring chart just prepared, it should be remembered that a 110-volt lamp is to be burned only on a 110-volt circuit; a 115-volt lamp on a 115-volt circuit; or, in general, each lamp only on a circuit of the voltage for which that lamp was designed.

As indicated, the information on the chart for 110-125-volt systems may be used for all voltages within the range. Either chart may be obtained on request from the engineering department, National Lamp Works, Nela Park, Cleveland, Ohio.

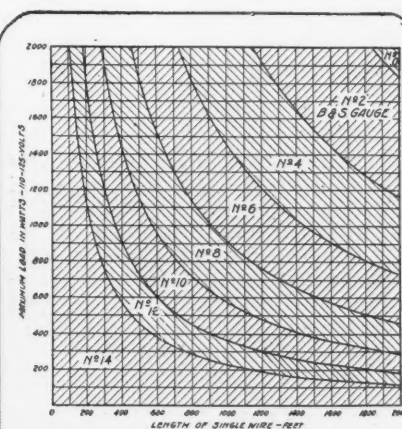


Chart for Determining the Proper Wire Size for 110-125 Volt Country Home Lighting Circuits

Limiting the voltage drop in the wiring for lighting is essential to the successful operation of lamps and appliances. Use the above chart in selecting the proper size of wire for 110-125 volt installations.

Wire length to be used is twice the wiring distance between points to be wired.

ENGINEERING DEPARTMENT  
National Lamp Works of General Electric Company  
Cleveland, Ohio

### 110-125 VOLT COUNTRY HOME LIGHTING

#### Installation Suggestions.

**Wiring.**—Use wire of sufficient size to prevent objectionable voltage drop in conductors. No. 14 (B. & S. Gauge) copper wire is usually entirely satisfactory for the wiring of the house itself; but where the product of the load, in watts, and the length of single wire, in feet, exceeds 45,000, use No. 12 wire.

The chart on the reverse side of this card may be used for choosing wire size for specified loads at various distances from the source of supply. The drop will be limited to 5 volts for the maximum. To find the proper size of wire for 600 watts at a distance of 250 feet, requiring 500 feet of single wire, follow the 600-watt line horizontally across the chart until it intersects the 500-foot vertical line. The point of intersection lies in the No. 12 zone, indicating that No. 12 wire is the size to be used. For outdoor spans it is usually advisable to use at least as large as No. 12 in order to have sufficient mechanical strength.

**Lighting of the House.**—Lighting of the country home should receive the same careful attention as the city residence. Install neat, harmonizing fixtures with good reflectors which protect the eyes from the glare of the lamp filament. Provide a flexible switch control and plenty of convenient outlets for fans, irons, or portables.

**Lighting of Outbuildings.**—In most cases use 25-watt MAZDA lamps with porcelain-enameled steel-dome reflectors.

**Stock Barns.**—Feeding alleys—25-watt lamps at 20-foot spacing. Cleaning Alleys—One 25-watt lamp for each stall with not more than 4 or 5 lamps to a switch. Hayloft and Chute—One 25-watt lamp and dome reflector.

**Hog House.**—25-watt lamps, 15 to 20 feet apart, over feeding alley.

**Garage.**—Two 15 or 25-watt lamps and socket for trouble lamp.

**Shed.**—75-watt MAZDA C lamp or larger, depending on height, and concentrating reflector located at top.

**Barnyard.**—75-watt MAZDA C lamp and dome reflector mounted on 16-foot pole.

**Motor Loads.**—Where desirable, provide for small motor loads such as for churning, water pumping, etc. Heavy motor loads such as required for thrashing, shelling, etc., cannot be accommodated with country home lighting plants of usual size.

(Over)



## THE JOBBER'S SALESMAN



*Ideas Other Men Have Used  
to Help Them Sell*



### Cutting Out Free Rides to the Country Trade

As the country roads get better with summer weather, the electrical jobber's salesman begins to head his Ford into the "roller-towel" territory that he could not reach in the winter. The soap salesman and the peanut peddlers are wise to this fact. They also know how Mr. Electrical Salesman hates to take those long drives alone. So they are Johnny-on-the-spot for a chance to occupy the vacant seat. Preferably they desire to occupy it free.

Now while the jobber's salesman goes about his territory telling the contractor-dealers to buck up and make a profit he himself is weak when it comes to making a charge for that vacant seat in his car. He has not yet learned how to merchandise that ride. He is just like the contractor-dealer. He could get the money for the asking, but he has not learned how to ask. He wants the other salesman to think he is a good fellow, when the other fellow is really playing him for a sucker. No logical reason exists why an electrical house should stand the transportation expense of some soap salesman. It can make no money on his small town sales. So the best plan on starting out of town with a would-be free passenger is to lead the old Ford up to a roadside filling station and invite the minion of the Standard Oil Company to fill her up at the expense of friend Passenger.

### Optimism that Begets Sales

The optimist is the fellow who goes out and does it while the rest are sitting around, saying, "It can't be done." The optimist says, "It's a fine day." The pessimist says, "It's a weather breeder." The optimist calls it a "fine rain"; the pessimist, "A nasty storm." Ask a pessimist how business is and he replies: "There ain't no such animal." Ask an optimist and he says, "It's better

than I expected." It isn't the condition of the weather or the business situation that makes pessimists. They are born so or have allowed themselves to become so through habit and carelessness.

### BUSINESS THRIVES ON OPTIMISM

Optimism is more important in business than almost anywhere else. Our whole lives are colored by our business experiences. What we are at home, on our vacations, in our hours of leisure, depends on what we are in our work. If we are down-

hearted while lugging our selling arguments around on our territory, we cannot become light-hearted the minute we lay aside our business habiliments and descend into private life. If we are going to have any fun in life, we must develop optimism.

### OPTIMISM WILL DEVELOP GOOD SALES

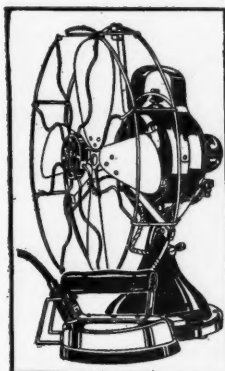
Good sales, it may be thought, will develop optimism. Probably they help make it easier to develop it, but they will not, of themselves, develop it. On the other hand, optimism will go a long way toward developing good sales. Optimism is the best-known antidote for a grouch. You cannot do business while carrying a grouch. Whether it is natural or not; whether you want to be or not, be optimistic. With all your getting, get Optimism!

### Dainty Foods Attract Attention to Range Window



Here is a range window which held the attention of passers-by with its attractive display of dainty dishes cooked on the electric ranges of local housewives. Each plate of muffins, pie, cake, and bread, and each jar of vegetables or preserves was labeled with the name of the maker, and from each card, ribbons were strung to the electric oven in the background. During the month following the exhibition of the window display here shown, twenty-three ranges were sold in the town where the exhibit was made. Somebody will get more business, if salesmen will suggest this display idea to their customers.

## Tell Your Customers to Try This Advertisement Now



### RIDICULOUS

Isn't It?  
To Advertise  
Fans in the  
Winter Time  
**BUT**

you will want yours ready for service on the first hot day. There is always a rush to have fans repaired when hot weather comes, frequently causing delays amounting to weeks. Why not get out your fan, clean it up, oil it carefully and try it out. If it needs repairing

### TAKE IT TO YOUR ELECTRICIAN

and have it placed in first class shape, ready for instant use. Take that discarded iron along. Maybe it can be fixed up also, without much expense.

### Peoples Light Co.

125 West Third Street

If you didn't run an ad like this during the late winter, that is all the more reason why you should run it now. This advertisement ran for two days in the daily papers of Davenport, Ia. C. A. Nash, new-business manager of the Peoples Light Company, is responsible for this wide-awake idea.

## Finding New Customers

It is often possible to find good prospective customers outside of the beaten path, outside of your list of customers and prospective customers. Are you on the look-out for chances of that sort? Are you taking pains to find dealers not now carrying such a line as yours, perhaps not carrying any electrical merchandise, who might branch out in that direction profitably? When you pick the right man and get him started on the successful development of a new branch of trade, you make a life-long customer of him.

### SMALL TOWNS AND VILLAGES OFFER BIG OPPORTUNITIES

There are opportunities for you to find small buyers in towns you have not been making, have not thought worth making. Some villages and even crossroads stores have a big volume of trade and could handle a good deal of your line because of the presence of electrical power generally used. If you have to wait an hour or two for trains, unless you do not want any more

business in that place, spend the time looking around.

You may be pretty well satisfied with the business you are getting out of a certain town and yet not be getting all you should. There may be a dealer whose business you know little or nothing about who is selling more electrical merchandise than the dealers on whom you call. It is a mistake to take anything for granted. If you don't feel like calling on the other dealers than those you sell and asking them to buy while your regular customers are treating you well, at least drop into the other stores and have a look at their stock and see how they seem to compare with the ones you sell. It is a mistake to leave unknown propositions undeveloped and waiting for someone else to take the advantage of them.

## When You Answer a Help Wanted Ad

A certain large company recently passed on a collection of possibly twenty-five written applications for a position of more or less responsibility, entailing a salary of approximately \$2,200 a year. The majority of these letters were so appallingly bad that it seems worth while to set down the reasons therefor, so that he who is looking for a better job will stop and profit thereby. Here are some of the things you shouldn't do when writing a letter of application.

### THINGS TO AVOID

1. Don't use your wife's stationery.
2. Don't use the stationery of your third last employer or hotel stationery unless you really live at the hotel.
3. Don't dash off a hurried, slovenly reply. This is not a far-fetched point—seven out of the twenty-five were obviously dashed off in about two minutes apiece.
4. Don't be slangy or facetious.

Now for the constructive criticism. If you don't possess good stationery, go out and buy some plain, heavy white stationery, in a size suitable to be used by a man, unless you are going to typewrite the answer, in which event a good quality of the regular commercial 8-in. x 11-in. size should be employed. If you are a one-finger artist on the typewriter, get some-

## Making It Easier for the Salesman

### "Our Message"



¶ This message we are sending to our general list of customers and those whom we would like to see customers, too. You will hear from

all kinds of sources the probability of good or bad business, to begin and end at a certain time—now our message is not one in which we prophesy anything.

¶ We, however, do believe in the Spirit of the American people, with their "go and do it spunk" to overcome obstacles that others might worry and ponder over. Believing this, we are going to try in our small way to get others to think as we do.

¶ It can't hurt anyone because we don't advocate big curtailment or big buying. We suggest the use of your good common sense—and if need be hit a happy medium. Preach the doctrine of—being American—and that means being equal to the job of pushing aside all obstacles in your path, and show the world we can and are prepared for Peace as we prepared for War.

¶ In short, forget anything, but prospects of prosperity—be loyal to and have confidence in this good U. S. A., and don't believe a pessimist. Get the idea! In your way carry on the idea, too—Boost and Work.

¶ Yours to put the U. S. A. over the top Commercially.

Manhattan Electrical Supply Co., Inc.  
St. Louis, U. S. A.

We are interested in learning if this is good logic or not. Will you spend 2c to tell us?

When C. H. Wilson, the manager of the Manhattan Electrical Supply Company, St. Louis, felt the wave of pessimistic business uncertainty sweeping over the country he decided to go "long" on the United States and to carry his trade with him. Therefore, his friends call him a peptomist. They do this because they say there are three kinds of people, namely, the pessimists who say it can't be done, the optimists who say it can be done, and the peptomists who do it. The increase in the company's business would indicate that Mr. Wilson's efforts met with success and "Our Message" printed on this page shows one of the methods he used to reach his customers. A return postcard was attached to each card to bring back the customers' impressions. That the message met with a sympathetic reception was proved by the answers which came in.

body else to write the letter or write it in as clear a handwriting as possible. The appearance of letter and envelope counts for a great deal.

Make the letter sound natural and easy—do not strive after a so-called "complete letter-writer" style. Before writing it, list the points the advertisement wants answered, and decide upon clear, complete answers to the questions, so that when you come to the actual writing you will have all these facts in mind in their logical sequence.

For, remember, many a man has landed a job that started him on a successful new career—all through a well-written letter.



# Record of Lighting Fixture Patents

Issued from January 21 to February 11, Inclusive

Compiled by NORMAN MACBETH  
Consulting Illuminating Engineer, New York City

## Design Patents

The following are ALL the design patents pertaining to lighting materials, issued by the U. S. Patent Office, between January 21 and February 11, 1919, inclusive:

52,944. Outlet Box. John C. Boyton, Cleveland, Ohio, assignor to the Adapt Company, Cleveland, Ohio. Filed Nov. 11, 1918. Issued Feb. 4, 1919. Term of patent, eleven years.

52,953. Flat Elbow Base for Fittings for Electrical Conductor Conduits. Cecil R. Hubbard, Baden, and Homer G. Knoderer, Edgeworth, Pa., assignors to the National Metal Molding Company, Pittsburgh, Pa. Filed May 4, 1918. Issued Feb. 4, 1919. Term of patent, fourteen years.

52,954. Flat Elbow Cap for Fittings for Electrical Conductor Conduits. Cecil R. Hubbard, Baden, and Homer G. Knoderer, Edgeworth, Pa., assignors to the National Metal Molding Company, Pittsburgh, Pa. Filed May 4, 1918. Issued Feb. 4, 1919. Term of patent, fourteen years.

52,967. Arm for Lighting Fixtures. Maurice Rosenberg, Brooklyn, N. Y., assignor to Shapiro & Aronson, Inc., New York, N. Y. Filed April 23, 1918. Issued Feb. 4, 1919. Term of patent, three and a half years.

52,968. Arm for Lighting Fixtures. Maurice Rosenberg, Brooklyn, N. Y., assignor to Shapiro & Aronson, Inc., New York, N. Y. Filed April 23, 1918. Issued Feb. 4, 1919. Term of patent, three and a half years.

52,969. Arm for Lighting Fixtures. Maurice Rosenberg, Brooklyn, N. Y., assignor to Shapiro & Aronson, Inc., New York, N. Y. Filed April 23, 1918. Issued Feb. 4, 1919. Term of patent, three and a half years.

52,955. T-Base for Fittings for Electrical Conductor Conduits. Cecil R. Hubbard, Baden, and Homer G. Knoderer, Edgeworth, Pa., assignors to the National Metal Molding Company, Pittsburgh, Pa. Filed May 4, 1918. Issued Feb. 4, 1919. Term of patent, fourteen years.

52,956. T-Cap for Fittings for Electrical Conductor Conduits. Cecil R. Hubbard, Baden, and Homer G. Knoderer, Edgeworth, Pa., assignors to the National Metal Molding Company, Pittsburgh, Pa. Filed May 4, 1918. Issued Feb. 4, 1919. Term of patent, fourteen years.

52,966. Arm for Lighting Fixtures. Maurice Rosenberg, Brooklyn, N. Y., assignor to Shapiro & Aronson, Inc., New York, N. Y. Filed April 23, 1918. Issued Feb. 4, 1919. Term of patent, three and a half years.

52,970. Arm for Lighting Fixtures. Maurice Rosenberg, Brooklyn, N. Y., assignor to Shapiro & Aronson, Inc., New York, N. Y. Filed April 23, 1918. Issued Feb. 4, 1919. Term of patent, three and a half years.

52,971. Arm for Lighting Fixtures. Maurice Rosenberg, Brooklyn, N. Y., assignor to Shapiro & Aronson, Inc., New York, N. Y. Filed April 23, 1918. Issued Feb. 4, 1919. Term of patent, three and a half years.

52,972. Spindle for Lighting Fixtures. Maurice Rosenberg, Brooklyn, N. Y., assignor to Shapiro & Aronson, Inc., New York, N. Y. Filed April 23, 1918. Issued Feb. 4, 1919. Term of patent, three and a half years.

## Mechanical Patents

1,291,701. Electric Ceiling Fixture. Harry C. Adams, St. Louis, Mo. Filed May 16, 1918. Issued Jan. 21, 1919.

1,291,945. Lamp Shade or Reflector. Isaac Libson, Brooklyn, N. Y. Filed June 28, 1918. Issued Jan. 21, 1919.

1,292,383. Protector for Electric Lamps. George Francis Venn, Ottawa, Ontario, Canada. Filed Aug. 24, 1918. Issued Jan. 21, 1919.

1,292,432. Lighting Fixture. Wesley E. Cochran, Cleveland, Ohio. Filed May 2, 1918. Issued Jan. 28, 1919.

1,292,669. Porcelain Socket. John Weber, Schenectady, N. Y., assignor to Weber Electric Company, Schenectady, N. Y. Filed Oct. 27, 1914. Issued Jan. 28, 1919.

1,293,161. Lamp Construction. Frederick Shannon Mills, Los Angeles, Cal. Filed April 22, 1918. Issued Feb. 4, 1919.

1,293,674. Light Shade. Clarence J. Black, North Little Rock, Ark. Filed March 14, 1918. Issued Feb. 11, 1919.

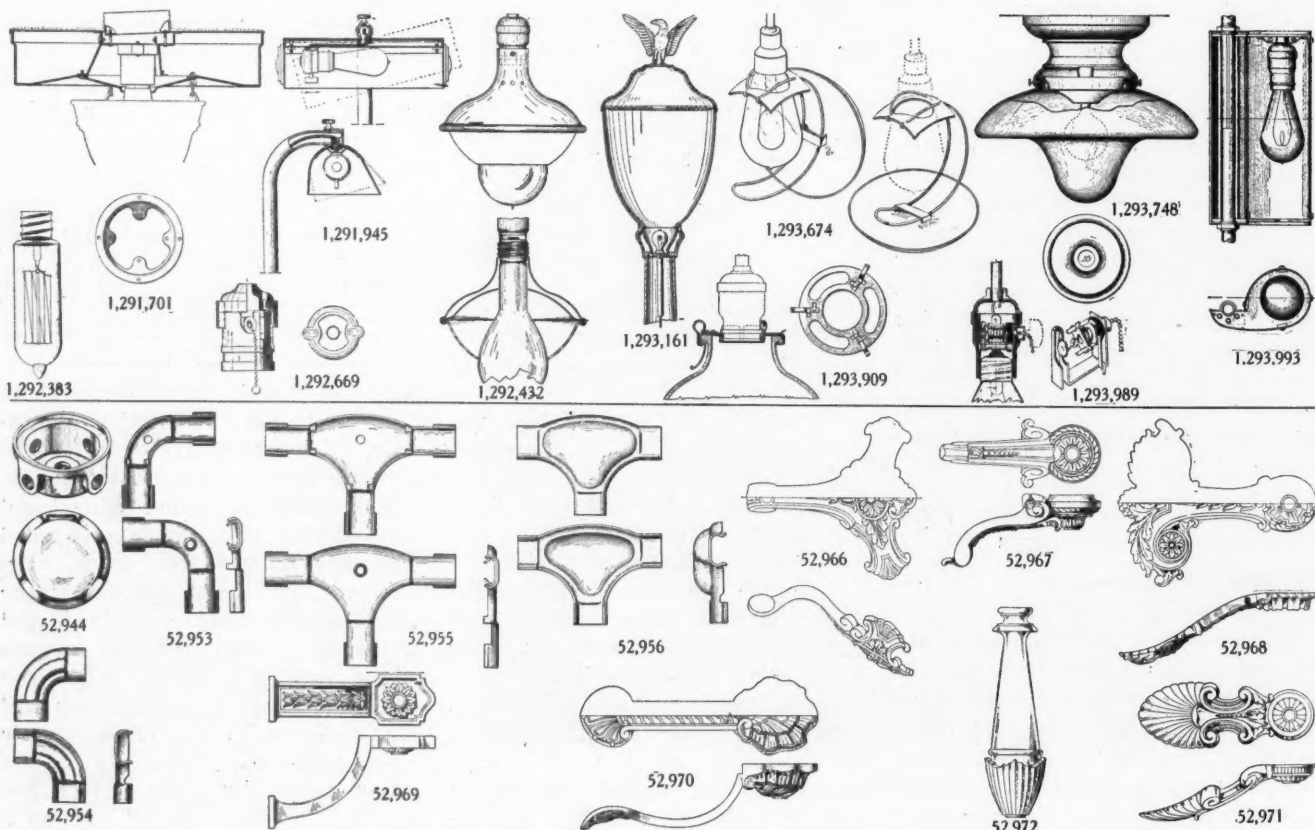
1,293,748. Diffuser. Charles C. Fricke, Chicago, Ill., assignor to the Phoenix Glass Company, Pittsburgh, Pa. Filed May 19, 1917. Issued Feb. 11, 1919.

1,293,909. Electric Light Globe Holder. Edward D. Pickering, Cleveland, Ohio. Filed March 11, 1918. Issued Feb. 11, 1919.

1,293,989. Lamp Socket. Frank W. Turner, Kansas City, Mo., Marshall Leffler, Kansas City, Kan., and Clark Douglas, Kansas City, Mo. Filed Nov. 6, 1916. Issued Feb. 11, 1919.

1,293,993. Gage-Glass Illuminator. Ray P. Vastine, Chicago, Ill., assignor to Recordway Manufacturing & Sales Company, Chicago, Ill. Filed Oct. 20, 1914. Issued Feb. 11, 1919.

GEORGE L. WILKINS, recently commercial manager of the Wisconsin Public Service Company, has resigned the office to become affiliated with the Illinois Electric Company of Chicago as sales representative. Mr. Wilkins goes to an old-established and big company at an advancement over the position he has been holding. The resignation of Mr. Wilkins took effect Feb. 1. Mr. Wilkins went to Green Bay two years ago as commercial manager of the public utility. Formerly he was commercial manager of the Sheboygan Gas Light Company. He was promoted from Sheboygan to Green Bay.



Copies of illustrations and specifications of patents may be obtained from the Commissioner of Patents, Washington, D. C., for 5 cents each

## GOSSIP OF THE TRADE



*Glimpses of Electrical Men as  
Caught by Lens and Pencil*

### Electric Store Movement Gains in Wisconsin

One of the outstanding points which the second annual convention of the Wisconsin State Association of Electrical Contractors and Dealers at Milwaukee on March 24, 25 and 26 brought forth was the fact that the electric store movement is getting well under way in Wisconsin. The reason for this is that men who were contractor-dealers, with emphasis on the contractor end, lost a considerable part of their capital in trying to do business at starvation prices during the period of scant building through which the country has passed.

While this was going on, jobbers' salesmen, trade publications, manufacturers' sales people, and everybody in the industry kept dinning into the ears of these contractor-dealers the fact that they were slipping and that the thing to do was for them to get into the electrical merchandising business. Finally

quite a few of these men have gone into electrical merchandising and as one of them expressed it, he made more money in February, 1919, than he did in all of the five years that preceded that month. He made this money simply because he went into the merchandising business. He is handling specialties. He remarked further that this does not prove that February was an exceptionally good month, but it proves that his system during the past five years was certainly wrong.

Another important phase of the meeting was the fact that the real electrical contractor-dealers of the state were there. About eighty of them were registered, and they not only attended the sessions, but they spent time with the manufacturers and jobbers in the forty trade exhibits that went with the convention, planning out how to sell goods. This good attendance at the convention reflects the fact that the membership of the Wisconsin Association has increased from 21 to 114 in the last year.

New officers for the association were elected. These men who will serve the association in an official capacity during the coming year are: P. C. Burrill, Milwaukee, chairman; John L. Aker, Sheboygan, treasurer; John A. Piepkorn, Milwaukee, secretary; executive committee: The three elected officers and Hans Larson, Racine; J. J. Kelly, Eau Claire; George Spilegel, Clintonville; William Meter, Oshkosh, and J. Duer, Stoden.

The program was carried out to the letter as advertised. W. H. Morton, general manager of the National Association of Electrical Contractors and Dealers, explained the aims and objects of the national association. He pointed out that it costs the association something over \$9 to carry a member on its books a year, and that the average receipts per member are only about \$8.30. J. E. Sweeney of Waterloo, Iowa, spoke of the approved credit and accounting system of the national association. His address was received with a great deal of interest, because the

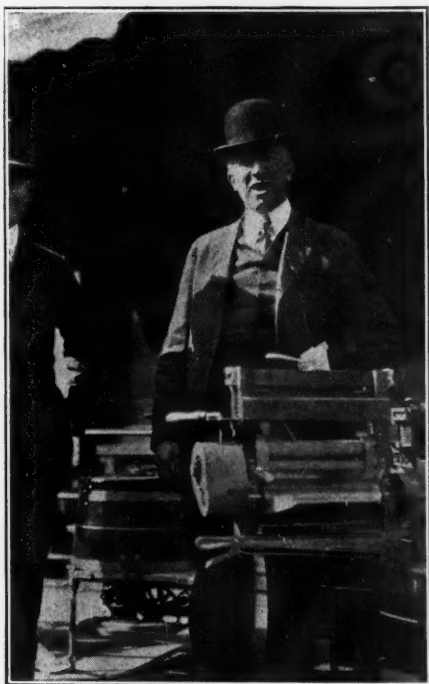
contractors are beginning to realize the need of adequate accounting. Many questions were asked Mr. Sweeney, and finally at the close of the discussion the association went on record as recommending the use of this accounting system to its members.

### HOW TO HANDLE DEALER ADVERTISING

One question in the question box provoked considerable discussion, it was: "What relative emphasis should the dealer place upon his own name and upon the manufacturers' name in his local advertising; that is, should the dealer's name be in big type, and the manufacturers' name in small type when he is advertising a nationally advertised appliance, or should it be worked vice versa? Opinion was divided on the subject, but it seemed to be generally understood that the dealers are appreciating the value of putting their own best foot forward, and they are also appreciating the value of cashing in on national advertising done by manufacturers.

But the address which brought forth the most discussion, and which seemed to be of the greatest interest to the members was "The Apprenticeship Law" by Stewart Scrimshaw, who is a member of the Industrial Commission of Wisconsin. Under the terms of this proposed law the actions of both the apprentice and the employer are subject to the

(Continued on page 208)



P. C. Burrill of Milwaukee, the victim of the photographic atrocity on the left, is the new chairman of the Wisconsin Association of Electrical Contractors and Dealers. With him, behind the washing machine, stands John A. Piepkorn, the Wisconsin association's famous secretary.



John L. Aker, Sheboygan's busy electrical contractor, who has been placed in charge of the exchequer of the Wisconsin Association of Electrical Contractors and Dealers.



# NEW MERCHANDISE TO SELL AND WHERE TO BUY IT

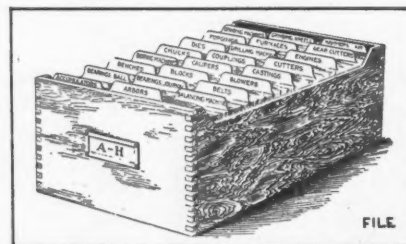
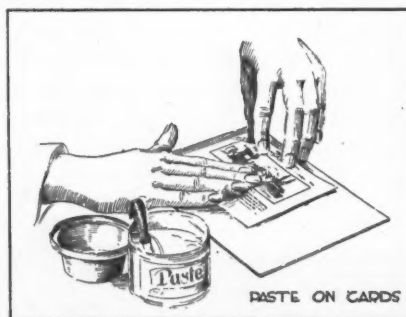
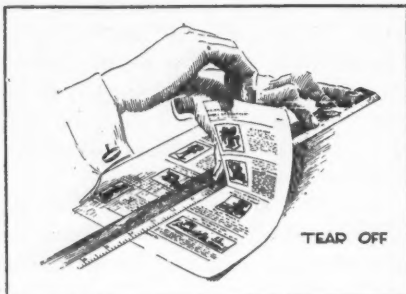
*Appliances, Socket Devices and Wiring Supplies Which Manufacturers and Jobbers Are Putting on the Market*

**Including Many New Appliances to LIGHTEN THE LABOR OF THE HOME**

## How to Use These Pages to Make Your Own Buying Index

Beginning with the September, 1917, number ELECTRICAL MERCHANDISING has been furnishing its readers with the selective new-merchandise catalog service continued on these pages. By tearing out those items which affect your business and pasting them on filing cards, you can make a buying index that will put information on what is made and who makes it, right at your finger's end.

Every item, with its illustration, will fit a standard 3-in. by 5-in. filing card. Or, if preferred, these items can be pasted on sheets of paper for binding in a loose-leaf catalog or folder.



This section "New Merchandise to Sell" is an editorial text section prepared by the editors solely in the interests of readers of ELECTRICAL MERCHANDISING. As its title explains, its purpose is to put before our readers information concerning the new merchandise and latest inventions on the market.

To be described here, articles or devices must be new and of general interest to our readers. These descriptions are solicited from all manufacturers, and the items are published free of all cost to the maker of the device, and without respect to advertising or any other consideration, except their interest to the reader. The editors are the sole judges of what shall appear in this section, and readers may depend upon the independent character of this service.

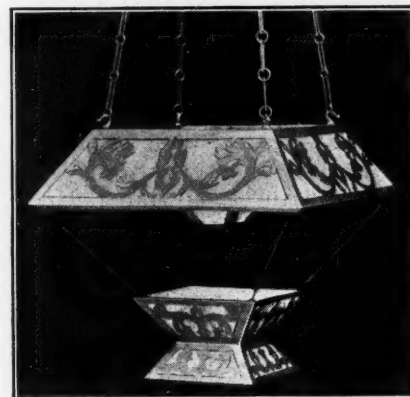
## Triple-Illumination Lighting Fixture

*From Electrical Merchandising, April, 1919*

Elimination of eyestrain and the utilization of direct, indirect and semi-indirect illumination are pointed out by the Dempsey-Glavin Electric Corporation, 408 West Thirty-fourth Street, New York City, as some of the features of the Dempsey light unit which it is manufacturing.

The upper reflector is formed either of metal or glassware with metal edges and has a lining of opalescent glass. The lower reflector is also made of metal or glass and has a lining of white glassware. Placed in the top of the upper section is an inverted reflector whose outside forms a portion of the upper reflector and whose inside serves as a means of directing light toward the ceiling for reflection. Two bulbs, controlled by separate pull switches, are used, one in the ceiling reflector and a larger one attached to a socket in the bottom of the ceiling reflector but inclosed by the lower section.

The lower reflector is adjustable so that when raised toward the upper section the reflected rays are broadened and when lowered away from the top section the rays are narrowed. The maker says that the fixture's ventilation is exceptionally

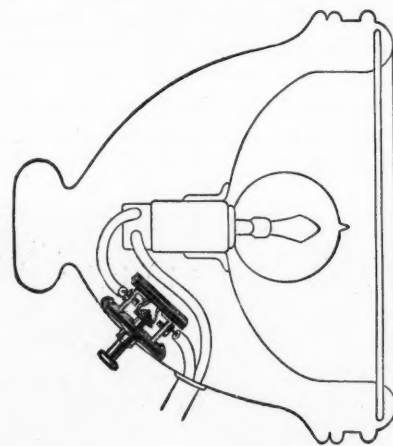


good since free circulation for air is provided up through the lower section and in the upper reflector, thus lengthening the life of lamp bulbs. This unit may be obtained with plain or decorated glass sides, with metal sides finished in bronze or brushed brass, or with a special lower reflector adapted for library use.

## Switch Mounted Inside of Spotlight Shell

*From Electrical Merchandising, April, 1919*

One of the recent developments of the Cutler-Hammer Manufacturing Company, Milwaukee, Wis., is a push-and-pull spotlight switch made for mounting within the shell of the light. According to the maker, a satisfactory automobile lighting switch must have large "wiping" contact surfaces to prevent excessive contact resistance, and the contactor must "float" on the operating shaft in order that vibration and side strain on the button shall not cause the light to flicker. Both of these features have therefore been incorporated in this switch. Its insulating parts are made of fiber, the frame of stamped steel, the contacts of brass, and the contactor of phosphor bronze. These parts are riveted together into one solid unit which, it is stated, does not loosen or change alignment when subjected to vibration or strain. The switch mechanism is not inclosed because it is installed inside of the spot-light shell with only the button protruding.



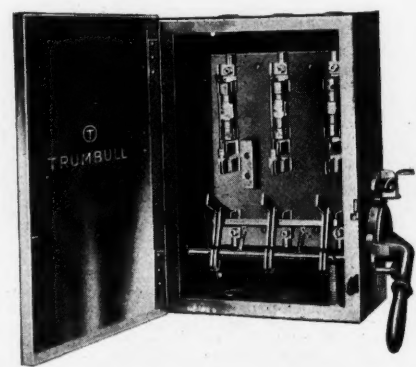
## Externally Operated Motor-Starting Switches

*From Electrical Merchandising, April, 1919*

Recent additions to the products of the Trumbull Electric Manufacturing Company of Plainville, Conn., are its externally operated motor-starting switches of the "straight-through" type furnished with either hand release or an under-voltage release coil. These switches have the safety features common to others made by this company, since the box cannot be opened until the switch is in the "off" position and a catch prevents the switch from being closed with the box cover open. Hence, with fuses and blades always "dead" whenever the switch is eliminated, shock and fire hazards are eliminated.

In using the new-type switches the operator throws the handle forward until it comes to a dead stop in the first or no-fuse starting contacts. When speed is up he draws the handle slightly back, about 15 deg., but not out of contact, until the plunger is released, and then throws the switch forward into the second or fused running contacts. In this way the contact is never broken because the switch passes directly through starting into run-

ning contacts, and as the switch does not leave the starting contacts until it enters the running contacts there is no arc at this stage of operation. In addition, there is no arc from the running contacts when the switch is opened, since the running contacts are not used to break the current.



### Portable Air Compressor with Storage Tank

From *Electrical Merchandising*, April, 1919

A new "Lectroflator" outfit, consisting of a  $\frac{1}{2}$ -hp. electric air compressor and a cylindrical pressed-steel reservoir horizontally mounted on three wheels and provided with a handle, has been announced by the Black & Decker Manufacturing Company at Baltimore, Md. The capacity of the compressor, a standard B. & D. No. 2 unit, is 2 cu.ft. of free air per minute, while the reservoir measures 14 in. by 30 in. and holds enough air at one filling to inflate five average-size tires from flat to full pressure or ten tires from 40 lb. to 80 lb. This new outfit is furnished complete with switch, electric cable, attachment plug, pressure gage, safety valve, 25 ft. of hose, tire connector and all piping and wiring.



### Universal Conduit Box

From *Electrical Merchandising*, April, 1919

The Seidler-Miner Company, Detroit, Mich., is marketing a conduit box which can be used for plug, receptacle, junction, switch, angle or pendant fixtures and other devices by adding to it different covers and fittings to suit individual needs. Holes are drilled and tapped in the box and sealed tight by plugs so that it has the advantages of a knock-out box and yet can be used for one, two, three or four-way connections. When it is desired to make additional runs the box need not be taken out but only a plug knocked out and a conduit screwed in. The box's interior has a coating of insulating varnish and is also bossed giving added strength at the conduit holes, whether these be for  $\frac{1}{2}$ -in.,  $\frac{3}{4}$ -in. or 1-in. pipe. The screw holes for interior fittings are spaced  $1\frac{1}{2}$  in. apart. Rustproof cast iron or brass are the materials used in the construction of these boxes.

### Combination Hot-Water Bottle Heater and Curling Iron

From *Electrical Merchandising*, April, 1919

An interesting appliance is being marketed by the Christian Heater Sales Company, 532 Grand River Avenue, Detroit, Mich., in the shape of a combination curling iron and hot-water bottle heater. It consists of the electric heater proper, a curling iron handle and a heat regulating switch. To use the heater in a regulation water bottle it is screwed into the neck of the bottle and the plug is inserted in any light socket with direct or alternating current at 90 to 125 volts. The heat is regulated by the switch at three temperatures—high, low and medium. It is pointed out that after the water heats to the desired temperature it may be maintained at that degree without the water boiling by shifting the switch to a lower heat. Also it is said that the heat has a tendency to keep the rubber of the bottle soft and pliable.

### Bell-Ringing Transformer for Socket Installation

From *Electrical Merchandising*, April, 1919

The "Liberty" bell ringer made by the Betts & Betts Corporation, 511 West Forty-second Street, New York City, for furnishing suitable current from a lamp socket to operate bells, buzzers and annunciators has been improved by placing the binding posts for the bell circuit on the side of the transformer and placing a screw shell socket in the bottom end where the posts formerly were. Thus the bell ringer does a double duty, it provides current for bell ringing, and in addition a lamp bulb or a plug for an iron, stove or other appliance may be placed in the socket. The low-voltage transformer consumes little energy because of its small magnetizing current. The core is made of steel and the windings are well insulated and filled with a moisture-proof sealing compound. The casing is of black japanned steel, while the screw shells of the socket are surrounded by porcelain.



### Direct and Indirect Lighting Unit

From *Electrical Merchandising*, April, 1919

Among the features which J. Livingston & Company, Grand Central Terminal, New York City, claim for the "Economy" light, which they recently developed, are simplicity in construction to allow for cleaning, economical initial cost of unit, small energy consumption, total absence of glare and long life of the lamp bulb due to maximum ventilation. The fixture is simple and pleasing in outline and is well proportioned. A soft, direct downward illumination is given through the "Celestialite" glass dish. Indirect downward illumination is obtained by means of the outside of the porcelain-enameled reflector and the ceiling. The unit may be used in homes, studios, offices, stores, factories, etc., and may be obtained in both plain and decorated styles.

### Fittings for Industrial Wiring

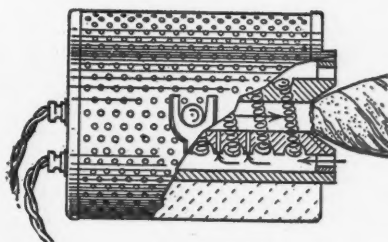
From *Electrical Merchandising*, April, 1919

A new line of industrial wiring devices is being manufactured by the Efficiency Electric Company of East Palestine, Ohio. One of these is a three-phase wiring support having special cleats with a removable upper corner. Also included is an adjustable fitting used to clamp conduit or other pipes parallel with or at right angles to I beams, thus doing away with pipe straps and wood blocks. Since the clamp is reversible the conduit may be carried on either side of the beam flange. An anchor for mounting outlet boxes on concrete walls, columns and ceilings is also part of this company's line.

### Locally Controlled Commercial Lighting Unit

From *Electrical Merchandising*, April, 1919

To illuminate offices, factories, stores, meeting halls, schools, armories, etc., S. Edw. Eaton & Company, 585 Hudson Street, New York City, have developed the "Econolite," which is made in several sizes accommodating gas-filled lamps ranging from 75 watts to 1000 watts. According to the manufacturers, the aim of the designer was to diffuse properly the powerful light of gas-filled lamps without sacrificing a large percentage of its candlepower. The lines of the translucent reflector and its relation to the diffusing dish meets the requirements of a broad spread of reflected light, while the diffusing dish breaks up the direct rays of light and gives a soft white light without glare. A distinctive feature of the unit is its method of affording local control. The pull chain from a standard socket is guided around the bulb and out through the bottom of the dish support, thus accentuating the balance and symmetry of the fixture and eliminating a pendent or wall switch.



### Electric Cigar Lighter

From *Electrical Merchandising*, April, 1919

Lighting cigars by freshly heated air is accomplished by the Apfel electric cigar lighter now being marketed by the Electric Sales Corporation, 1812 Ninth Avenue, South, Seattle, Wash. The lighter comprises a perforated metal cylinder containing an electric heating element and mounted on a stand for counter attachment. To light a cigar it is placed against an opening in one end of the lighter, where heated air lights it at the end evenly. Since tobacco or other foreign substances do not come in contact with the heating unit long life is obtained and since no flame or spark is produced outside of the lighter a high factor of safety is present, says the maker.

Each item will fit a 3-in. x 5-in. standard filing card. Simply clip and paste on card (or loose-leaf sheet), filing under proper heading for ready reference when you want to buy. Continued on third and four pages following.



(Continued from page 205)

jurisdiction of the industrial commission for a three-year term of the apprenticeship. On account of the difficulty which so many contractors have with apprentices, who leave them after becoming only partly proficient, and after having really absorbed the employers' investment in them without giving anything in return, the Wisconsin contractors are in favor of such a law. A committee of three was appointed by the association which will act with the committee of three from the labor unions, and these bodies, together with the industrial commission will form a state board on electrical apprenticeship law, and it is hoped that something definite will grow out of their deliberation, since the labor unions as well as the contractor employers appear to favor it.

Two very practical talks were given by Samuel A. Chase, special representative of the Westinghouse Electric & Manufacturing Company, and by Thomas Casey, vice-president of the Hurley Machine Company. Mr. Casey told the dealers how successes in merchandising had been made by electrical contractor-dealers in other parts of the country. Mr. Morrissey distributed the new 1918 Underwriters' Code, and explained the changes in it.

William L. Goodwin of New York

was the main speaker at the banquet at which about 150, including the ladies, were present. Mr. Goodwin took this occasion to make a special appeal to the ladies, in connection with his campaign to educate electrical contractor-dealers to make a profit. In closing he requested the ladies to ask their husbands three questions after they had returned to their homes from the convention. He requested them to ask first: "Are you fair to the trade?" Second: "Are you fair to your competitors?" Third: "Are you fair to me and to yourself?" While Mr. Goodwin did not attempt a technical explanation of what "twenty-five and twenty" meant to the contractor, he did point out that "twenty-five and twenty" meant one new dress a month to the wife of the contractor. In these terms the necessity for twenty-five and twenty was very well understood among the ladies.

In connection with its Goodwin movement activities the association appointed a committee which met with a central station committee, the central station men being in convention at Milwaukee during the same period. These two associations, representing the central stations and the contractors of the state, have come together on a basis which appears to be one out of which will grow a considerable measure of trade harmony in the State.

## Ohio Contractors Discuss Organization Work

The Ohio Association of Electrical Contractors and Dealers held its quarterly convention at the Chittenden Hotel, Columbus, March 12. A. L. Oppenheimer in an interesting address outlined the work done and being done by the state and national associations, and laid great stress on the fact that if the contractor wishes to reap the full benefit from the association he must be willing to devote a part of his time and effort to the upbuilding of the organization and must assist in the work being done to better the industry. Mr. Oppenheimer also made a report of the National Executive Committee meeting which was held in Pittsburgh Jan. 20 and 21.

J. C. McMasters followed with an interesting paper on the co-operation given to the electrical contractors by the manufacturers of electrical devices.

A short but interesting talk was given by M. G. Buchan in which he laid emphasis on the importance of the electrical contractors throughout the State backing up the national association with their whole-hearted co-operation.

C. M. Beltzhoover reported the progress made in Cincinnati in the way of organization and said that they had received support from the jobbers.

J. O. Wingate drew attention to the necessity of proper estimating methods and went on to show how an organization such as that in Chicago, tends to eliminate the old hit-and-miss idea of contracting. Similar organizations in all the larger towns will do away with such methods as this. Said Mr. Wingate, "I asked one of the leading contractors in a certain city what method he used in estimating labor—whether he figured by the foot for running conduits, or by the hour? He told me that it was impossible to estimate labor by the foot or hour. The only way was to picture in your mind some building you had already done that was similar to the one you are figuring on and if you came out all O. K. on the labor on the first job use this figure to estimate the second; but if you had lost on the first add a little more to the second."

The following applications were presented and approved: Luse Electric Company, Warren; W. A. Bonn

## Oklahoma Jovians Turn Time Backward



The Oklahoma Jovians rejuvenated at the Lee-Huckins Hotel, Oklahoma City, and initiated a class of twenty-nine. Among those inducted into the order were Prof. J. G. Kommerman, professor of electrical engineering at the University of Oklahoma, H. A. Tone, secretary of the Oklahoma Utilities Association, and Frank Carter, manager of the Oklahoma Gas & Electric Company, Martin A. Wolf of St. Louis, E. H. Waddington of St. Louis, and J. M. Stephens of Kansas City were among the prominent out-of-town Jovians present. Harry Mussen presided as master of ceremonies.

Electric Company, Sandusky; U. N. D. Electric Company, Akron; Weisz-Brooks Company, Columbus; O. L. Bowers Electric Company, Columbus; Corbin Electric Company, Columbus; Hard Electric Company, Columbus; L. A. Wolfrey, Columbus; Cooper Electric Company, Bellaire, and Cuyahoga Power & Construction Company, Cleveland.

Following the regular session, E. Enriken, president of the Columbus association, invited those present to attend a country dinner given by the members of the local association. All accepted the invitation. J. C. McMasters acted as toastmaster and the speakers were Messrs. E. Entekin, A. L. Oppenheimer, M. G. Buchan and W. Griffith.

### 1000 Men Attend Delco Farm Plant Convention

Eight hundred dealers and 200 guests attended the third annual sales convention of the Domestic Engineering Company at Dayton, Ohio, on March 12, 13 and 14. Dealers were there from all over the world, one even coming from far South Africa. The guests came mainly to exhibit electrical supplies and appliances that can be sold to users of farm-lighting plants. The chief aim of the convention was to show Delco distributors and dealers how to make more money by selling more plants and appliances.

In his opening address R. H. Grant, general manager of the Do-

mestic Engineering Company, spoke of the development of the farm-lighting business, declaring that its future success depends upon the product manufactured, and the organization selling it. He urged the dealers to take the business seriously, and to make sales in a manner that would make the plants stay sold.

Following an address by C. F. Kettering, chief engineer of the company, there were short talks by the distributors and dealers who have made record sales during the past year. E. H. Walker of Toledo, the distributor who made the greatest percentage of his quota of sales, was the first speaker. He was followed by C. E. Wagner, Omaha; J. J. Munsell, Columbus, Ohio; S. O. Lindeman, Charlotte, N. C.; F. H. Hochanadel, Toledo; H. S. Compton, Memphis; W. A. Sanders, Dallas, and William Lowman, Silver Creek, Neb. These men all made enviable sales records during 1918.

#### THE KILOWATT CLUB

Then followed the introduction of the Kilowatt Club members. These dealers have particularly distinguished themselves in sales during the past year. The officers of this organization are: Main Fuse, Wm. Lowman; main switch, F. H. Hochanadel; meter, H. S. Compton; circuit breaker, W. A. Saunders. Those in the organization who are less distinguished than the officers are known as "volts," and still another grade are known as "members."

On the following day the conven-

tion really got down to work. C. F. Kettering spent one and a half hours talking on the engineering development work of the Domestic Engineering Company. He outlined the engineering plans of the organization, taking the dealers into the confidence of the concern as to what might be expected in the future. He was followed by W. K. Jamison, who told of the additional production machines and equipment which had been purchased and installed in the factories in order to keep production at least within the "seeing" distance of sales. The service which dealers might expect on farm-lighting plants and on water-pumping equipment was then explained by R. E. Smithson and S. R. Prugh.

After luncheon editors of farm papers were each given five minutes in which to speak of the relations of their concerns to the farm-lighting plant industry. One editor became so enthusiastic over the possibilities of farm lighting that he declared himself ready to purchase a farm plant if the dealer representing a certain territory in an out-of-the-way district of Virginia were present. From the rear of the hall came a shout "I'm here! I'm here!" and a sturdy red-headed dealer mounted the platform and took the editor's contract while his fellow dealers applauded the sale.

Then followed a "staged" typical water pump sale. In this demonstration Mr. Prugh used the sales data which can be worked up to show

(Continued on page 212)



Eight hundred dealers and two hundred guests attended the third annual sales convention of the Domestic Engineering Company at Dayton, Ohio, on March 12, 13 and 14. The illustration shows the dealers and guests assembled outside of the Memorial Hall in which the convention was held.





### Inclosed Lighting Fixture for Gas-Filled Lamps

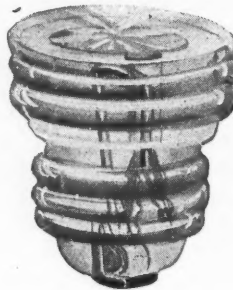
From *Electrical Merchandising*, April, 1919

Instead of designing a lighting fixture to meet the requirements of several sizes of lamps and thereby effecting a compromise, Young & Egan of New York have developed units for each of the standard gas-filled lamps. This provides, the makers say, lighting of finely graded intensity and diffusion to fit individual requirements. As a result of this designing the unit around the bulb, perfect diffusion is said to be obtained, since the lamp filament in each unit is placed in the correct position. The unit is made in one piece of frosted glass between layers of clear glass. The light source is concealed, eliminating glare, and the fixture is shaped to give a minimum of light absorption with a maximum of illumination. The Sibley-Pittman Electric Corporation, Sixth Avenue and Thirteenth Street, New York City, is distributing this unit, which is known as the "Ray-O-Day."

### Fuse Plug Refillable Without Tools

From *Electrical Merchandising*, April, 1919

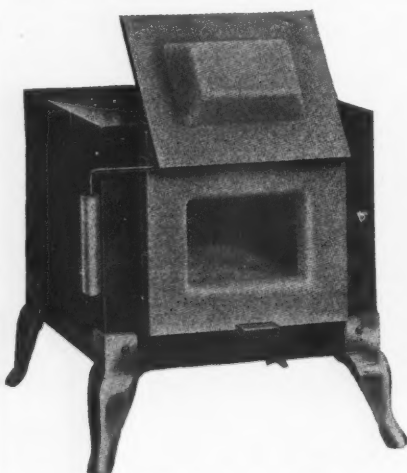
Only four parts, exclusive of the ribbon or wire fusible element, form the refillable fuse plug recently placed on the market by the Betts & Betts Corporation, 511 West Forty-second Street, New York City. These are the porcelain body, the metal cap, the threaded metal band for screwing into the socket, and the clamp contact which grips the lower end of various sized fuse strips and stays securely in the bottom of the plug, thus assuring positive contact with the socket. The opposite end of the fuse element makes contact with the fuse shell and is said to be as effective as a soldered terminal. No tools are required in renewing the plug, and the handling of screws, nuts and washers is eliminated. These refillable plugs may be obtained in 5-amp. to 30-amp. sizes for 125 and 250 volts.



### Vacuum Cleaners

From *Electrical Merchandising*, April, 1919

The Quaker vacuum cleaner has been recently developed by the Jewel Electric Company, 4714 Broadway, Chicago, and is made of polished aluminum, has a 1/7-hp. motor and is equipped with a friction-driven brush. The nozzle is 12 in. wide, rollers allow the machine to run easily over carpets or rugs and a switch on the cleaner's handle makes control easy. Additional nozzles for cleaning special articles may be procured if desired. This concern is also marketing the Jewel cleaner which is operated by a 1/2-hp. motor, has an 11-in. nozzle and uses a revolving brush for taking up lint and threads. A pressed steel fan with six blades generates the suction. The cleaner has a push-button switch on its pistol grip handle and weighs 10 lb.



### Small Size Annealing Furnaces

From *Electrical Merchandising*, April, 1919

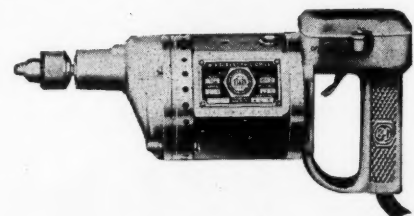
For treating carbon steels, for bluing, annealing and preheating high-speed steel, where absence of scale or warping and elimination of dirt common to heating with gas or other fuels is an important consideration, the Edison Electric Appliance Company, 5660 West Taylor Street, Chicago, recommends its recently developed electric annealing furnaces. In treating delicate dies and tools where an exact temperature control is essential for perfect results the use of these furnaces is also advised. A uniform distribution of heat is said to be obtained and the rheostat used with the furnaces gives temperature regulation from room temperature up to 1800 deg. Fahr. These furnaces are procurable with lengths ranging from 10 in. to 18 in. with heights of 7 in. to 14 in. and with widths of from 8 in. to 16 in.

### High-Speed Drills with Pistol Grip and Trigger

From *Electrical Merchandising*, April, 1919

Pistol grips and trigger switches are now obtainable on the 1/4-in. and 1/2-in. portable electric drills made by the Black & Decker Manufacturing Company of Baltimore, Md. Heretofore these features have been procurable only on the 3/4, 1, and 1 1/2-in. sizes of this company's drills. These models are one-hand drills, the current being controlled by pulling the trigger, without any necessity for changing the position of the hand holding the tool. In addition, it is pointed out, this convenient control prevents breakage of drill bits frequently caused by the drill sagging on the bit when the operator changes the position of his hands to switch off the current.

The energy consumption of both models is 175 watt-hours. The no-load speed of the 1/4-in. model is 1600 r.p.m. and that of the 1/2-in. drill is 1200 r.p.m. Both drills weigh about 6 1/2 lb. and come equipped with 15 ft. of duplex cable and a separable attachment plug.

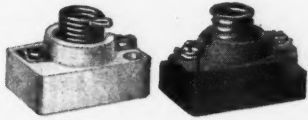


### Transformer for Welding Battery Connections

From *Electrical Merchandising*, April, 1919

In order to afford convenient means for burning or welding straps and posts on storage batteries, the General Electric Company of Schenectady, N. Y., has developed a small lead-burning transformer, designed on the arc-welding process principle. It consists essentially of a small transformer wound for connection to the usual 110-volt, 60-cycle lighting circuit or 50-40 cycle circuits and with a low-voltage secondary of limited short-circuit capacity. The primary leads are a standard lamp cord with a separable attaching plug at each of its ends, one for connecting to the lamp socket and the other for attaching to the transformer. The secondary leads are light flexible cable, one being provided with a clamp for grounding to the battery plate.

This equipment requires between 500 watts and 600 watts when operating, and when not working it uses but 4 1/2 watts.



### Candelabra Cleat Receptacles

From *Electrical Merchandising*, April, 1919

The wiring devices made by the Bryant Electric Company of Bridgeport, Conn., have recently been supplemented by new candelabra cleat receptacles which conform to National Electrical Code standards. They are made with a regular spun-copper screw shell and also with a shell of spring wire which expands as the lamp base is threaded into it. The tension of this spring wire is stated to be more than sufficient to prevent the lamp becoming loosened when subjected to great vibration and jar. The base of the block is made of high-grade molded composition of the character approved by the United States Navy and is said to be amply strong to withstand very severe service.

### Electric Refrigerators

From *Electrical Merchandising*, April, 1919

Motor-operated refrigerators are made in five styles by the McClellan Refrigerating Company, 564 West Adams Street, Chicago. These refrigerators come in 1/15 to 1-ton capacities and are intended for use in residences, farmhouses, stores and the like. The residence style is an iceless refrigerator with the motor mounted on top. The farm house type combines a refrigerator, the refrigerating machine and a freezing cabinet in which 15 to 20 lb. of ice may be frozen for other use. It is said that the refrigerator will maintain an even temperature of about 40 deg. Fahr. for preserving foodstuffs at a cost of 7 to 9 cents per 100 lb. of ice.

### Inclosed Lighting Unit

From *Electrical Merchandising*, April, 1919

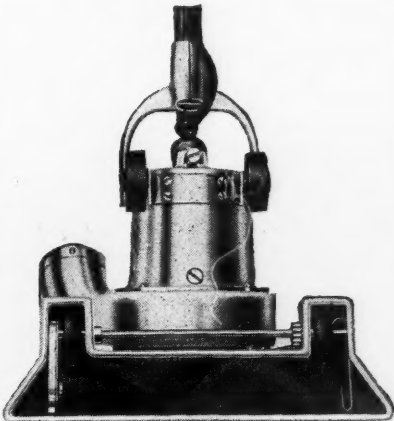
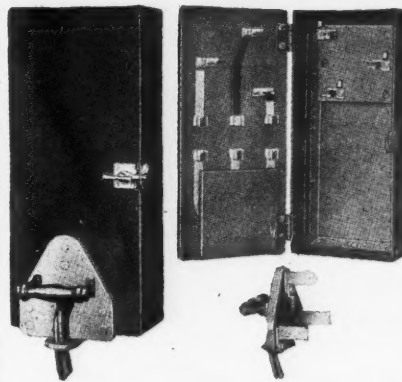
By using aluminum for finishing the interior of the reflectors in a recently developed unit, Shapiro & Aronson, 20 Warren Street, New York City, have obtained what they claim to be a very efficient and economical unit. This unit, which is known as Sa-Lite, is inclosed and is therefore dustproof and bugproof. It is said to have a wide range of commercial applications and presents a good-looking appearance. The unit is shipped completely wired and adjustable for immediate installation.



### Plug Box for Temporary Motor Connections

From *Electrical Merchandising*, April, 1919

To make temporary connection for portable motors a substantially built safety power plug box has been brought out by the Leonard Electric Company, Cleveland, Ohio. This box is so built that the door operates as a switch handle. Opening the door breaks the circuit ahead of the fuse so that fuses cannot be replaced when they are alive. A three-point staggered receptacle is provided so that the three-point plug can be inserted only in one position, thus eliminating possibility of polarity reversal. This device may be used on three-phase three-wire, two-phase three-wire, single-phase two-wire, or two-wire direct current. When used on a two-wire system the middle fuse and connections are not utilized.



### Vacuum Cleaner With Floating Brush

From *Electrical Merchandising*, April, 1919

A feature of the Regina vacuum cleaner being marketed by the Regina Vacuum Cleaner Company, 47 West Thirty-fourth Street, New York City, is its positively driven floating brush in the suction nozzle. This brush takes up lint and threads without injuring the carpet or rugs while at the same time regulating the position of the nozzle to meet different conditions. A dustproof gear box prevents clogging of the driving mechanism for the brush, which can be easily removed for cleaning. The brush and its drive are illustrated together with other details of the cleaner's construction.

### Small Size Light Plant

From *Electrical Merchandising*, April, 1919

The Matthews Engineering Company of Sandusky, Ohio, has added to its line of automatic lighting plants, heretofore consisting of 1, 2, 5 and 15-kw. plants, a new size known as the "Little Husky" which has a normal generator rating of 300 watts. This plant is a 32-volt type, like the 1-kw. plant, since the maker claims that even for so small a plant the limitations of a lower voltage would make it undesirable for the practical applications that a fifteen-light plant is put to. This plant features a direct connection of generator and engine, the generator frame and engine crank case being cast integral. The engine is a 4-cycle water-cooled type with a 2-in. bore and a 3-in. stroke. The plant is guaranteed to have 35 per cent overload capacity. A 60-amp.-hr. Willard glass cell storage battery is used. The ignition is from a 32-volt spark coil, and a breaker is mounted on the end of the cam shaft.

### Two-Stage Portable Air Compressor Outfit

From *Electrical Merchandising*, April, 1919

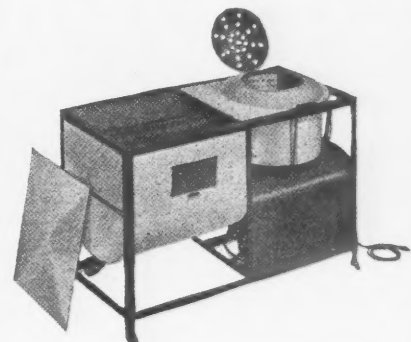
Many uses for the new "Usaco" two-stage portable air-compressor outfit are mentioned by the maker, the United States Air Compressor Company, Cleveland, Ohio. Dust and oil which accumulate in electrical machinery, and which, if neglected, may cause short-circuiting, can be cleaned from machines by this compressor more quickly and thoroughly than by hand cleaning with rags and bellows. The device is also adapted to clean textile or other machinery with delicate parts, where dust, lint or grit impairs efficiency and hastens deterioration. The outfits are also useful in removing soot from tubes of heating boilers and for various other services requiring high-pressure air. The unit comprises a motor for different current conditions, the self-oiling compressor, a 20-gal. tank, and various fittings such as air hose, plug, etc. Wheels and a handle are furnished to move the outfit.

### Combination Clothes Washer and Dryer

From *Electrical Merchandising*, April, 1919

Two separate machines—a washing cylinder and a centrifugal extractor—mounted on one frame compose the Marlow electrically operated washer and dryer recently developed by the Marlow Manufacturing Company, 2152 Superior Avenue, Cleveland, Ohio. This machine, which has a twelve-sheet capacity and is suitable for large families, small hotels, hospitals and institutions, is built on commercial laundry principles. The frame is made of steel throughout, while the two tanks are of vitreous porcelain. In one of the tanks the washing cylinder of perforated brass revolves at a speed of 35 r.p.m. and in the other tank the extractor operates at 1500 r.p.m., removing the water from the clothes in from three to five minutes and leaving them just damp enough for ironing. A ball-bearing motor is used and the friction drive mechanism is said to prevent shock to the driving parts and to prolong

the life of the motor. This machine can be used for washing and drying separately or both at the same time. It is mounted on castors and little vibration is present.



Each item will fit a 3-in. x 5-in. standard filing card. Simply clip and paste on card (or loose-leaf sheet), filing under proper heading for ready reference when you are in the market for electrical appliances or supplies.



## Forty New Lalley Light Distributors



The big feature about the recent Lalley Light sales convention was the fact that there were gathered together forty distributors who have come into the electrical business during the last year. All of these distributors are men who have had merchandising experience. They see in the farm lighting business an opportunity to expend their activities and the sale of farm-lighting plants is only the beginning of their activities—as other electrical sales would follow not only vacuum cleaners, washing machines, etc., but also wiring supplies.

(Continued from page 209)

how much labor a water pump will save on the farm. Accessories or electrical appliances, as they are called in the electrical trade, was the topic of R. C. Fowler, who stated that last year the accessories division of the business amounted to \$2,000,000. He urged the dealers to sell more accessories to their plant customers, because a customer can get full value from his plant only when he has labor-saving appliances to use with the plant. The last day of the convention was a full session. R. H. White spoke on the advertising plans of the company, pointing out how various pieces of literature which the company had issued could be employed in making sales. He was followed by R. D. Funkhouser, who told the dealers how to finance their business, how to talk to their bankers, and how to handle deferred-payment business. A prominent New York banker also addressed the dealers on this topic, urging them not to ask the banker to loan them

In other words "out of the blue" the Lalley organization has brought together a group of men with capital, who have a creative sales sense. The electrical industry is the gainer not only by the additional money brought into the industry—but by the number of men who have had mercantile experience with automobile, implement and other lines.

You cannot make rules and regulations that will hold down the expansion of industry. It just grows because of the opportunities for profit which exist in the distributing end of the electrical business.

money as a favor, but to make their appeal for a loan on a business basis.

The closing feature of the convention was a typical plant sale conducted by R. H. Grant. On the stage before the 800 dealers, and in fact, most of the guests, also, he demonstrated just how a dealer should work on a prospect. He placed especial emphasis on the value of using the literature which the company sends the dealers, as an excuse for coming back to the farmer.

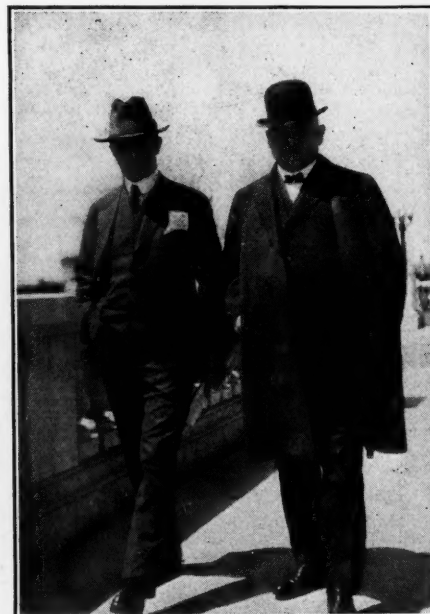
### WHO EXHIBITED AT THE DELCO CONVENTION

The following is a list of accessory manufacturers who exhibited their goods at the Delco convention: The Black & Decker Manufacturing Company; the Curtis Pneumatic Machinery Company; the American Electrical Heater Company; the Buckeye Churn Company; the Standard Churn Company; Taylor Brothers Churn & Manufacturing Company; the Hobart Manufacturing Company; Walker Brothers Company; Dayton Fan & Motor Com-

pany; Robbins & Myers Company; Benjamin Electric Manufacturing Company; the Standard Electric Stove Company; Edison Electric Appliance Company; American Conduit & Manufacturing Company; Detroit Vapor Stove Company; Sprague Electric Works; Nicholas Power Company; Victor Animatograph Company; H. G. McFadden Company; the Dayton Pump & Manufacturing Company; the George J. Roberts Company; Electric Service Supplies Company; Overbach & Ayers Manufacturing Company; Barkeley Electric Manufacturing Company; Landers, Frary & Clark; the Eclipse Folding Machine Company; the Dexter Company; the Home Specialty Company; the Hart & Hegeman Manufacturing Company; the Cutler-Hammer Manufacturing Company; the American Steel & Wire Company; the Buckeye Electric Division; Bledon & Dunn Company.

## Death of W. R. Johnson

William R. Johnson, treasurer of the Wisconsin State Association of Electrical Contractors and Dealers,



W. R. Johnson, whose death occurred on March 8, is the gentleman with the soft hat. His companion is George F. Rohn, a Milwaukee contractor.

died at Wausau, Wis., on March 8, 1919. Mr. Johnson has been active in association affairs for many years, especially in the State of Wisconsin. The association mourns the loss of one of its strongest and most active leaders.

